



FLIGHT

The
AIRCRAFT
ENGINEER
&
AIRSHIPS



First Aero Weekly in the World

Founder and Editor : STANLEY SPOONER

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport

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DIARY OF FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in the following list :—

1925

- July 26-Aug. 9 Vauville Light 'Plane and Glider Meeting.
Aug. 1-3 Royal Aero Club Race Meeting at Lympne.
Sept. 19-28 F.I.A. Conference at Prague.
Oct. 8 Aero Golfing Soc. Autumn Meeting, Walton Heath.
Oct. 24-29 Schneider Cup Race, Baltimore, U.S.A.

1926

- Aug. Light Aeroplane Competition.

EDITORIAL COMMENT.



The King's Cup Race

THE history of the King's Cup air races is one of steadily increasing confidence in the powers of aeroplanes and pilots, and in the reliability of aero engines. In 1922 and 1923 two days were devoted to a circuit of Great Britain, measuring roughly 800 miles. In 1924 the circuit was accomplished in one day. In 1925 a complete circuit was made twice on consecutive days. It is true that only three aeroplanes completed the two circuits, and that only four got home on the first day, out of 14 starters; but for that fog was mainly responsible. Fog can be dealt with on an organised air line; and perhaps the one advantage of using Croydon, instead of Hendon as the terminus for the race was that spectators could contrast the wholesale braking effects of fog upon the racers with the impressive regularity of the arrivals and departures of the cross-Channel aeroplanes. The cross-Channel pilots know their routes, so to speak, blindfold; and the possession of wireless apparatus gives them a confidence in facing thick fog which is of inestimable advantage. It was far otherwise with the racers. Without wireless they were for the most part helpless, and the wonder of Friday is not that six of the 14 were brought to earth by the fog bank over the Chilterns, but that eight won through to Harrogate and seven to New-castle. Another marvel is that no one was hurt in the forced landings.

There is, however, more than one gratifying feature of the 1925 King's Cup race. The first may be found in a scrutiny of the list of entries. In 1922, when the King first presented a cup, it was raced for by a field composed almost entirely of antiquated aeroplanes, and the only consolation which obtained from the contest was that there was still plenty of life in the old dogs of the British designers. In the 1925 race all the aeroplanes were respectably modern. There were two Avros; but an Avro is never antiquated. You merely put in a modern engine and

you have a modern machine. Likewise the Martinsyde was metamorphosed by the installation of a Jaguar "into something rich and strange." The D.H.51's and the Moths are modern in every sense of the word, and the Moths typify the very latest inspiration in the flying world. The Bristol Bloodhound and the Hawker Woodcock were both seen by the public for the first time at the R.A.F. Pageant last year. The Armstrong-Whitworth Ajax had never been seen in public before this race; while the three Siskins are only slightly different from the single-seater fighter which is still reckoned the latest thing in the Royal Air Force. We must not forget "Sylvia," who is neither in her first youth nor yet in middle age. Designed as a three-seater tourer for a private owner, she admirably fulfils her purpose and stands in a class by herself. Long may she continue to compete for the King's Cup. The race would not seem quite itself if Sylvia were not forcing the scratch man to open his throttle a little wider.

The details of the race and the performances of the placed aeroplanes are dealt with in detail elsewhere in this issue. Here we offer hearty congratulations, in the first place, to Capt. F. L. Barnard and, secondly, to the Siskin-Jaguar combination, each on winning a King's Cup for the second time. Their combined feat was in the circumstances a very fine one. On the second day, which was good enough, but not ideal, for flying, Capt. Barnard maintained an average speed of 151.43 m.p.h., which on a journey of over 800 miles is distinctly good. Not being pressed, he was able to ease his Jaguar, and did no lap between controls at over 156 m.p.h., although he could probably have raised 159 out of his Siskin.

We would also congratulate Squadron-Leader H. W. G. Jones on his performance, and at the same time sympathise with him on the unreliability of his compass on the first day. On the second day he started an hour behind Capt. Barnard, and, with only petty variations, kept that relative position from Croydon to Harrogate.

Unfortunately, it is not possible to refrain from some comment on last moment "adjustments" concerning the race. In the first place, the handicaps were changed at the last moment, and, not unnaturally, those who suffered felt somewhat sore. But we have great sympathy with the difficulties which confront handicappers, especially when dealing with new types of machines; and, if late in the day additional information reaches them, there is much to be said for taking the strong line and altering the handicaps with the object of making a better race. That the handicapping was good was proved by the good finish of the consolation race. No one could want to see a new type fly away with the cup because its capabilities had not been realised beforehand. In the second place, the course was altered late in the day, and Harrow-on-the-Hill was made a turning point to obviate flying across London. This should surely have been thought of at a much earlier stage. In this connection we must say that we consider Hendon a much better centre for sporting meetings than Croydon. It may be cheaper to use the latter, and the small number of people likely to attend at Croydon may be edified by the sight of the trans-Channel traffic; but all other advantages, and especially accessibility, are on the side of Hendon. The state of the Town Moor landing ground at Newcastle also calls for comment. A few officials could not be expected to make it perfect in the short

time at their disposal. But it ought not to have been possible for an aeroplane after landing safely to be seriously damaged by running into an unmarked depression, which, we are informed, actually happened to the Ajax. Finally, the wisdom of allowing the competitors to start on Friday in such a fog as then prevailed is seriously open to question. At Croydon many experienced pilots and others were emphatically of opinion that Friday's race ought to have been cancelled. Fortunately no one was hurt, but that was due to extraordinary good fortune. Risks must be run in sport which cannot be permitted in business; but the risks should never be excessive. An Amundsen, a Scott, and a Mallory may deliberately decide to risk their own lives; but a racing committee hardly ought to ask competitors to face more than a necessary minimum of risk, whilst it is surely anything but a good advertisement for aviation that so many of the competing machines should *apparently* be hopelessly inefficient and incapable of covering anything but the first short stage. The British public do not stop to reason why; they simply absorb the bare statement of facts published, with the result that nine out of ten dismiss aviation as an absurdity. It can therefore, hardly be questioned that the race on Friday *should* have been called off.

* * *

Air Mails in S. Africa

The announcement that the South African Air Mail was discontinued on June 15 came as a great disappointment to many, and seems to indicate a very short-sighted policy. The service was, of course, established for three months' trial only, but it was never expected that the Minister of Posts and Telegraphs, in conjunction with the Defence Department, would totally abandon all aerial development in the event of traffic not proving to pay. It was never, we believe, hoped that the traffic would show much revenue, and an actual profit was the last thing hoped for. All it was intended to establish was the possibility of such a service from the flying point of view, and this has been triumphantly demonstrated. The DH9's have flown two trips a week for six weeks, which adds up to something like 12,000 miles and there has not been one failure to arrive to time, there has not been a single mail boat missed and never has there been an engine failure. The cost of the six weeks' service was about 15s. per mile, including irrecoverable capital expenditure.

For a new service using machines which, though in perfect order, are of ancient design, that is a record to be proud of. The fact that the hangars are to remain at the coast in case an arrangement may be come to with one of the British or foreign firms now negotiating with the Union Government, seems to give some hope that total abandonment of flying in the Union may, after all, not be the outcome of the experiment. Unfortunately, the meagre support accorded the service in London, has given the impression that South Africa is not yet ready for aerial services. The truth is that there are few countries in which such great opportunities exist, and the complete and triumphant success of the air mail from the flying point of view has sufficiently demonstrated that those opportunities can be exploited to the full, given a sympathetic Government. It is a noteworthy fact that the Civil Air Board which stopped the service included, we are informed, no single man who is in any sense interested in flying. Its one flying member was absent.



THE FOURTH KING'S CUP CIRCUIT OF BRITAIN HANDICAP

THANKS to the almost impossible weather conditions prevailing during the greater part of Friday last, and particularly during the early hours of the day, the Fourth King's Cup Circuit of Great Britain Handicap was, taken as a whole, a great disappointment. A fairly strong entry gave promise of a good and interesting race, but instead of this we witnessed, within but a few hours of the start, a hard struggle, not altogether free from considerable risk to life and limb, between but a very small proportion of the total entry. In short, out of the 14 starters, six failed to complete the first stage of 191 miles, and four more dropped out within the next stage—a total distance of 261 miles out of the full 804 miles—leaving but four successfully to complete the day's circuit. Only one of these failures can be attributed to a mechanical defect, all the rest had to give up owing, directly or indirectly, to the bad weather conditions, or (in the case of three competitors) to slight damage to the machine on landing.

On the second day of the race conditions were much better, but one of the four left in the running—Bert Hinkler—had lost so much time the day before, having returned to Croydon only a few minutes before "closing time," that he decided it was useless to proceed, and so only three were left to finish the second portion of the race. Nevertheless, the race, such as it was, was an extraordinary demonstration of skill and endurance on the part of the competitors—successful and unsuccessful.

This year the race once again took a different form. The

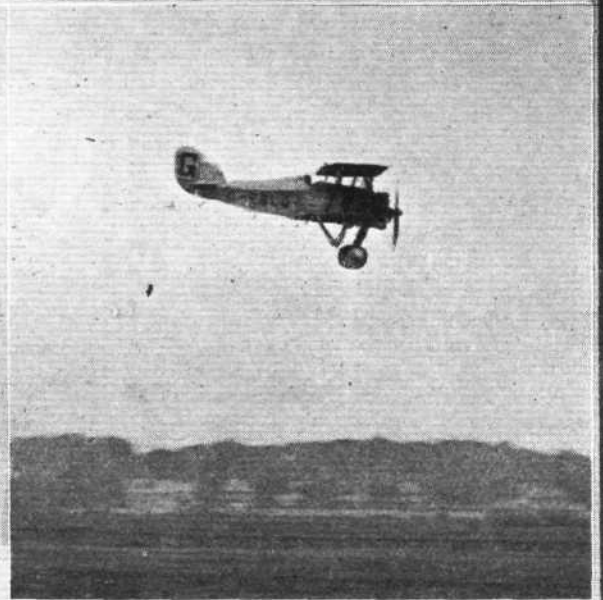
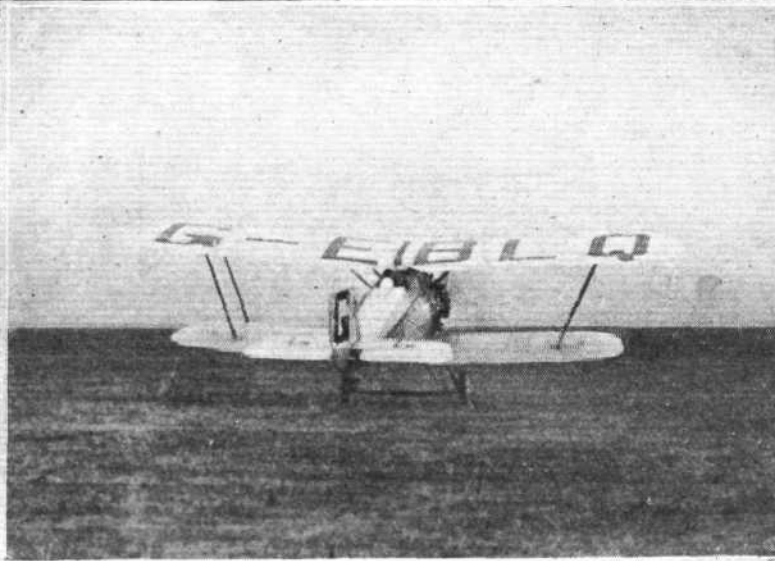
course, roughly encircling Great Britain, was about the same distance—804 miles—but this time the course had to be completed in one day, in an anti-clockwise direction, via Harrogate, Newcastle, Renfrew, Blackpool, Shotwick and Bristol, starting and finishing at Croydon, on the first day, Friday, July 3, and in the reverse direction on the second day, Saturday, July 4. Compulsory stops were made of half an hour's duration at Harrogate, Newcastle, Shotwick and Bristol, and of one hour at Renfrew, but competitors did not stop at Blackpool, only turning at the Tower at a distance not exceeding 300 yards and at an altitude of 1,000 ft.

There were 15 entries, only one of which, the A.N.E.C. entered by Maj. J.C. Savage and piloted by J. H. James—failed to put in an appearance. The King's Cup was won this year by Capt. F. L. Barnard on the Armstrong-Whitworth "Siskin V" (395 Siddley "Jaguar"), entered by the Right Hon. Sir Eric Geddes. Barnard's average speed for the course on the second day was a record one—151.43 m.p.h., or 5 hrs. 18 mins. 58 secs. net flying time for the 804 miles. His speed the first day was, however, barely 130 m.p.h. Besides the King's Cup, Barnard also won all the other subsidiary prizes—the only prizes he failed to get being second and third! These went respectively to H. W. G. Jones—who

started in the race as Flight-Lieutenant and finished as Squadron-Leader!—on the "Siskin IV" entered by Sir Glynn Hamilton West, and Maj. H. Hemming on A. S. Butler's D.H.37 "Sylvia" (275 Rolls-Royce "Falcon").



OFFICIALS AT THE KING'S CUP: From left to right, Brig.-Gen. Sir Capel Holden, the Judge; Col. F. Lindsay Lloyd, Timekeeper, and Capt. A. R. Dresser, Clerk of the Course



THE STORY OF A FAMOUS VICTORY : Capt. F. L. Barnard (left) leaves Croydon on Friday, July 3, at 9.48 a.m., and (right) arrives safely back (for the second time) on Saturday, July 4, at 4 p.m., having thus completed two circuits of Britain, or 1,608 miles. As a result, he is "mobbed" by an enthusiastic crowd, led by Press photographers; wins the cup—and a smile from Mrs. Barnard; and, finally, is "chaired" past the enclosures en route for some much needed rest and refreshment.

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THE KING'S CUP : The second man to finish, H. W. G. Jones, landing at Croydon on Saturday and receiving congratulations. He started in the race as a Flight-Lieutenant, R.A.F., and finished up as Squadron-Leader.

Jones put up a very plucky fight, starting from scratch and finishing only about 22 minutes after Barnard, while Hemming on a much slower machine accomplished a magnificent effort in "seeing it through" to the bitter end. Full particulars of the times, etc., of the various competitors will be found in the table on p. 434, so we will now proceed with the details of the race itself.

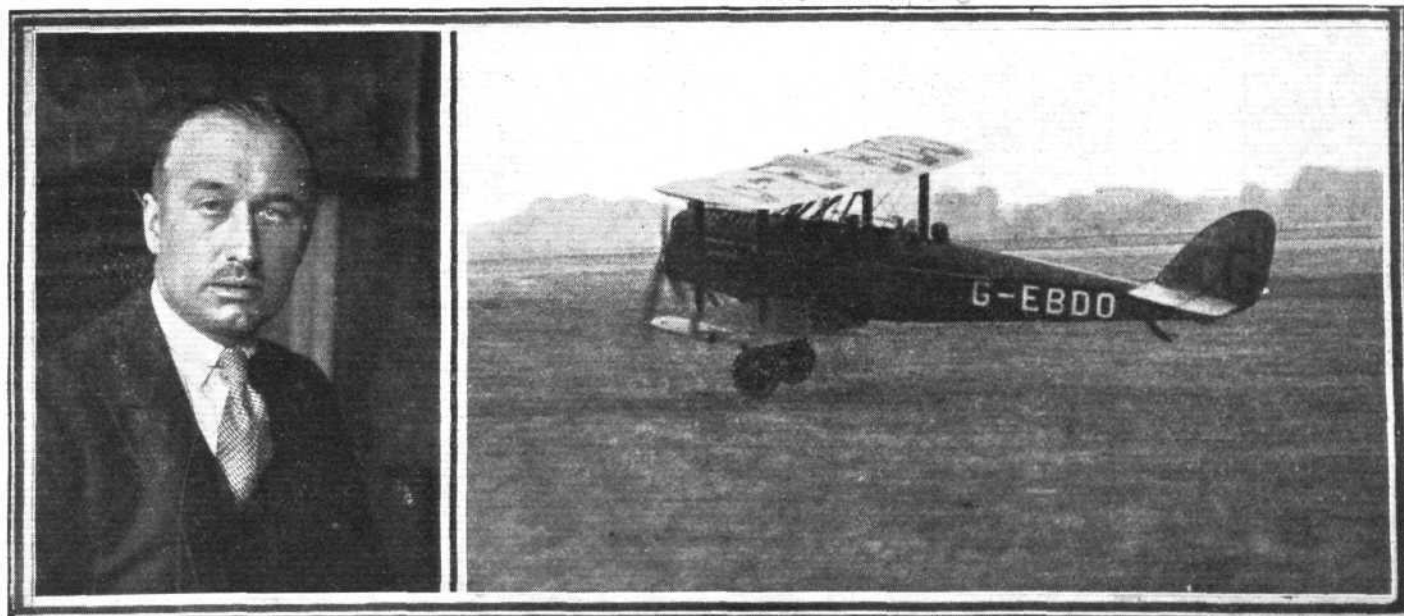
First Day (July 3).

The start from Croydon.—Just a mere handful of enthusiasts turned up at Croydon on Friday for the start of the King's Cup Race at 6 a.m., and most of these were more or less directly connected with aviation. There was, however, a

sprinkling of bona-fide spectators in the reserved enclosure, probably "locals" unable to sleep: we also noticed early on the scene "Long Tom," the aerial bookie, who lost no time getting to work laying odds right and left. The weather looked none too promising, the sky being overcast and there was a heavy ground mist in spite of a fairly stiffish North-Easterly wind.

Dead on six o'clock the two limit machines, the D.H. 60 "Moths," piloted by Alan J. Cobham and Capt. de Havilland, made a very pretty take-off together, and once up in the air were soon lost to view in the mist. While waiting for the next man to get away we watched the general activities of Imperial Airways, which included a test flight by a Vickers'

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THE KING'S CUP : The third and last competitor to finish was Maj. H. Hemming, who flew Mr. A. S. Butler's D.H.37 " Sylvia " (275 h.p. Rolls-Royce " Falcon "), which is shown on the right taking-off from Croydon on Friday.

THE FOURTH KING'S CUP

Circuit of Britain Handicap.

RESULTS.

First Day, July 3.



Order of Start.	Identification Letters.	Machine.	Engine.	Entrant.	Pilot.	Time Allowance.	Croydon, Depart.	Harrogate, 191 Miles, Arrive.*	Newcastle, 261 Miles, Arrive.*	Renfrew, 385 Miles, Arrive.†	Blackpool, 537 Miles (Turn).	Shotwick, 587 Miles, Arrive.*	Bristol, 697 Miles, Arrive.*	Croydon, 804 Miles, Arrive.	Net Flying Time.	Position.
1	G-EBKT	D.H. 60 "Moth"	27-60 "Cirrus"	Sir C. Wakefield	A. J. Cobham	h. m. s. 3 53 9	h. m. s. 6 0 0	h. m. s. Retired O	h. m. s. lney.	h. m. s.	h. m. s.	h. m. s.	h. m. s.	h. m. s.	h. m. s.	
2	G-EBKU	D.H. 60 "Moth"	27-60 "Cirrus"	Capt. G. de Havilland	Capt. G. de Havilland	3 53 9	6 0 0	Retired.								
3	G-EBKN	Airdisco Avro	120 Airdisco	Lt.-Col. Barrett-Lennard	H. H. Perry	3 7 54	6 45 15	Retired L	uton.							
4	G-EBIL	A.N.E.C.	30 Anzani	Maj. J. C. Savage	J. H. James	Non-Start	er.									
5	G-EBIQ	D.H. 51	120 Airdisco	Air-Com. J. G. Weir	Col. Master of Sempill	2 55 16	6 57 53	Retired St	. Albans.							
6	G-EBIM	D.H. 51A	120 Airdisco	S. Donoghue	Capt. C. D. Barnard	2 47 59	7 5 10	14 39 50	16 33 57	Retired D	oncaster.					
7	G-EBKQ	Avro 504 N.	180 A-S "Lynx"	A. V. Roe	B. Hinkler	2 31 48	7 21 21	11 58 56	13 30 0	15 37 41	—	18 29 23	20 5 40	21 43 19	11 21 58	4
8	G-EBDO	D.H. 37 "Sylvia"	275 R-R "Falcon"	A. S. Butler	Maj. H. Hemming	1 36 42	8 16 27	12 57 1	14 10 21	15 37 41	17 55 3	18 12 12	19 38 34	21 15 41	9 59 14	3
9	G-EBGG	Bristol "Bloodhound"	400 Br. "Jupiter"	Sir G. Stanley White	T. W. Campbell	1 1 48	8 51 21	Retired L	uton.							
10	G-EBMA	Hawker "Woodcock"	400 Br. "Jupiter"	T.O.M. Sopwith	Maj. P. W. S. Bulman	0 39 56	9 13 13	Retired L	uton.							
11	G-EBLM	A-W "Ajax"	395 A-S "Jaguar"	J. D. Siddeley	Capt. F. T. Courtney	0 33 0	9 20 9	11 57 2	13 4 45	Retired N	ewcastle.					
12	G-EBKL	A.D.C. Martinsyde	395 A-S "Jaguar"	Lt.-Col. M. O. Darby	Sq. Ldr. W. H. Longton	0 25 9	9 28 0	14 47 54	Retired H	arrogate.						
13	G-EBLN	A-W "Siskin V"	395 A-S "Jaguar"	Maj. F. M. Green	Capt. J. L. N. B. Baggs	0 5 9	9 48 0	11 35 51	14 35 0	Retired N	ewcastle.					
14	G-EBLQ	A-W "Siskin V"	395 A-S "Jaguar"	Rt. Hon. Sir Eric Geddes	Capt. F. L. Barnard	0 5 9	9 48 0	11 17 25	12 30 0	14 9 57	16 15 3	16 35 15	17 47 40	18 59 17	6 11 17	1
15	G-EBLL	A-W "Siskin IV"	395 A-S "Jaguar"	Sir Glynn H. West	Sq. Ldr. H. W. G. Jones	Scratch	9 53 9	11 42 32	12 50 0	15 1 19	17 12 0	17 17 10	18 32 53	19 55 0	7 1 51	2

Second Day, July 4.

Order of Start.	Identification Letters.	Machine.	Engine.	Entrant.	Pilot.	Time Allowance.‡	Croydon, Depart.	Bristol, 107 miles, Arrive.*	Shotwick, 226 miles, Arrive.*	Blackpool, 267 miles (Turn).	Renfrew, 419 miles, Arrive.†	Newcastle, 543 miles, Arrive.*	Harrogate, 613 miles, Arrive.*	Croydon, 804 miles, Arrive.	Net Flying Time.	Position.
1	G-EBLQ	A-W "Siskin V"	395 A-S "Jaguar"	Rt. Hon. Sir Eric Geddes	Capt. F. L. Barnard	h. m. s. 0 5 9	h. m. s. 7 41 31	h. m. s. 8 25 14	h. m. s. 9 47 0	h. m. s. 10 31 50	h. m. s. 11 31 32	h. m. s. 13 21 46	h. m. s. 14 17 55	h. m. s. 16 0 29	h. m. s. 5 18 58	1
2	G-EBDO	D.H. 37 "Sylvia"	275 R-R "Falcon"	A. S. Butler	Maj. H. Hemming	1 36 42	8 26 22	9 18 32	10 55 2	11 44 55	13 1 41	15 8 42	16 11 1	18 10 13	6 43 51	3
3	G-EBLL	A-W "Siskin IV"	395 A-S "Jaguar"	Sir Glynn H. West	Sq. Ldr. H. W. G. Jones	Scratch.	8 42 42	9 23 36	10 45 22	11 29 55	12 33 14	14 23 25	15 19 34	17 23 45	5 41 3	2

* Compulsory stop of 30 minutes.

† Compulsory stop of 1 hour.

‡ The time gained, or lost, on the first day's race by each competitor was subtracted or added (as the case might be) to his time allowance for the second day's race.

A-S = Armstrong-Siddeley. A-W = Armstrong-Whitworth. Br. = Bristol. R-R = Rolls-Royce.

PRIZES.—In addition to the King's Cup, the following subsidiary prizes were won, thus:—

Capt. F. L. Barnard:—

£100 presented by Sir Charles C. Wakefield, Bart., to the winner of the King's Cup.

£100 presented by the Residents of Harrogate, to the entrant of the machine which completed the whole course in the fastest time.

£50 presented by the Residents of Harrogate, to the entrant of the machine which made the fastest handicap time to Harrogate on the first day.

£50 presented by the Residents of Harrogate, to the entrant of the machine which made the fastest handicap time from the commencement of the Race to Harrogate on the second day.

£50 presented by the Directors of the Bristol Aeroplane Co. to the entrant of the machine which made the fastest handicap time to Bristol on the first day.

Sq. Ldr. H. W. G. Jones.—£100 presented by Mr. Samuel Samuel, M.P., to the entrant of the machine placed second.

Major H. Hemming.—£50 presented by Sir Charles Greenway, Bart., to the entrant of the machine placed third.

JULY 9, 1925

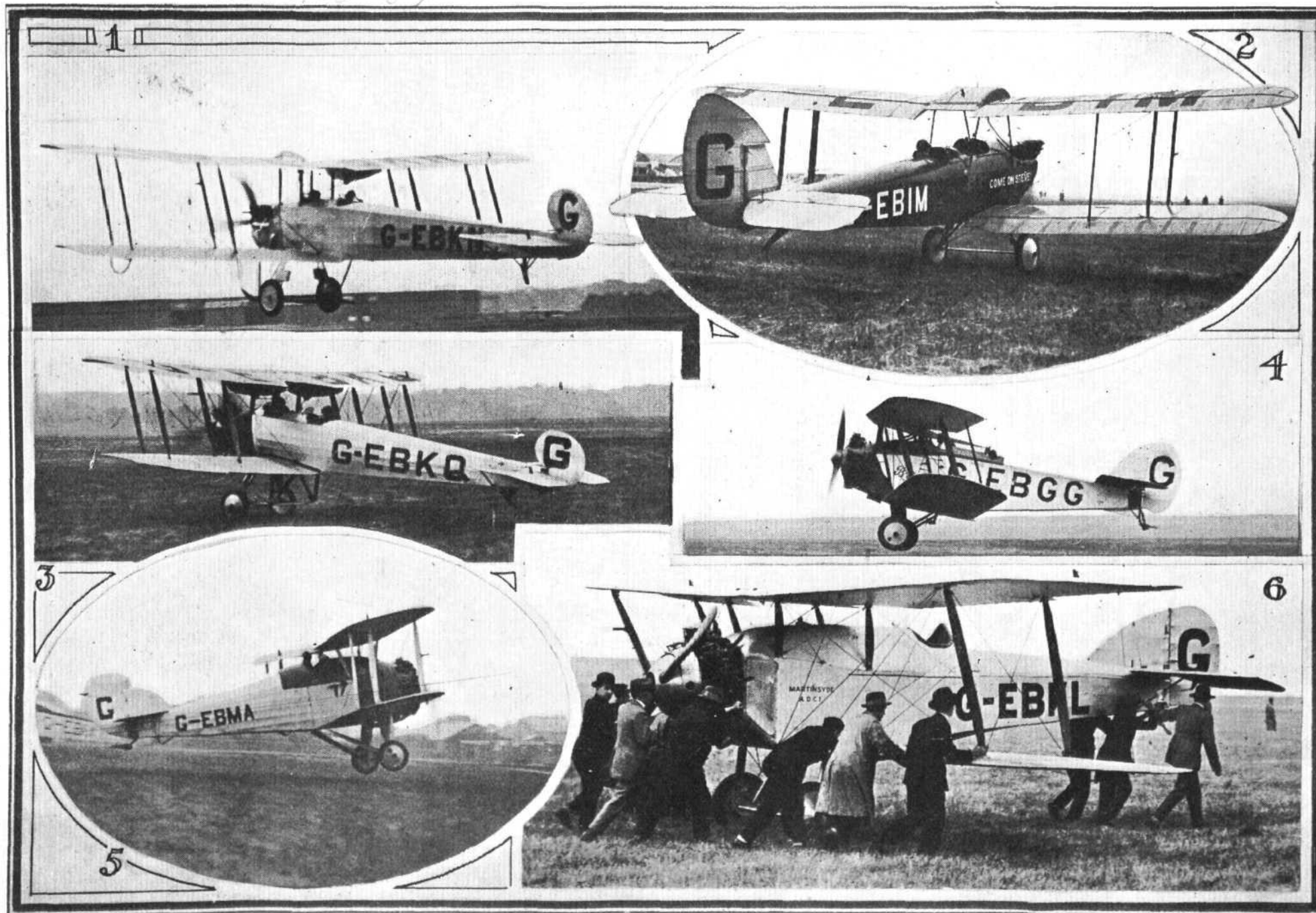
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THE KING'S CUP: Some of the first day's starters. 1, Perry, off on the "Airdisco" Avro. 2, Donoghue's D.H.51a, C. D. Barnard up. 3, Bert Hinkler gets away on the Avro 504 N. 4, T. W. Campbell well away on the Bristol "Bloodhound." 5, Bulman on the Hawker Woodcock, dodging the rain. 6, W. H. Longton's A.D.C. Martinsyde hurrying to the line.

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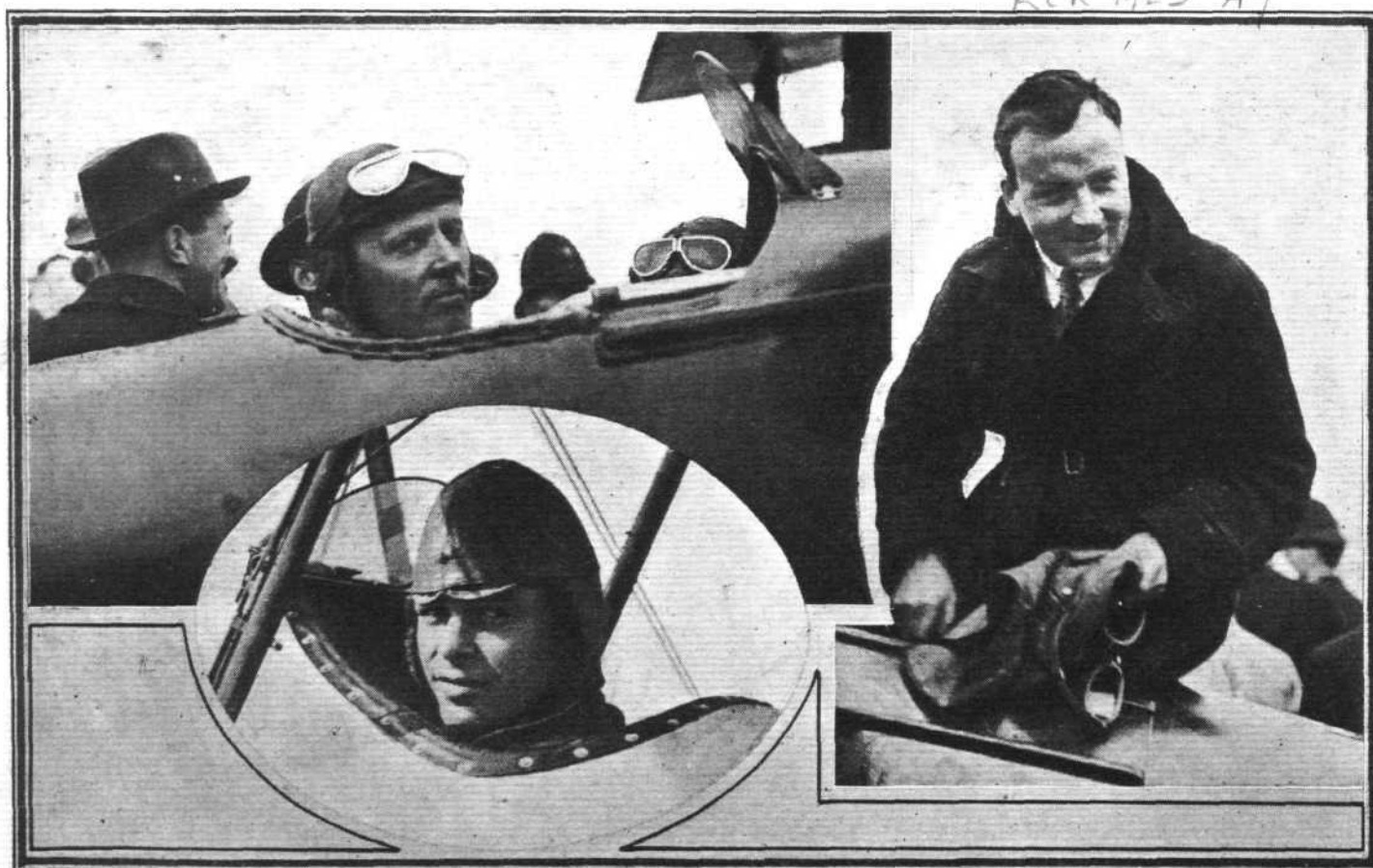
The King's Cup :
Hip - Hip - Hip ! —
Three cheers for
the winner of the
fourth King's Cup
Race, led by the
Duke of Suther-
land, Sir Sefton
Brancker, Comdr.
Perrin, and, of
course, the suc-
cessful entrant,
Sir Eric Geddes.



"Vulcan" which most of the time could only be heard and not seen. At 6h. 45m. 15s. H. H. Perry's "Airdisco" Avro (120 h.p. "Airdisco") entered by Lieut.-Col. Barrett-Lennard, was sent away. Major Savage's A.N.E.C., piloted by J. H. James should have been the next away, but this machine was unable to put in an appearance, so the next to go were two more D.H.'s, a 51 and a 51a, piloted respectively

by Colonel the Master of Sempill and Capt. C. D. Barnard. The former carried as passenger Air Commodore J. G. Weir, who entered the machine, while the latter carried two passengers, one being a lady. Barnard's machine, by the way, was entered by S. Donoghue and written on the side of the fuselage were the words "Come on Steve!" About seven minutes separated these two machines. Just as the

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THE KING'S CUP CONSOLATION HANDICAP : 1, Colonel the Master of Sempill, who won Friday's miniature King's Cup Race on the D.H.51 entered by Air-Comm. J. G. Weir. 2, Alan J. Cobham, who finished second on Sir Charles Wakefield's D.H.60 Moth. 3, Bert Hinkler, who obtained third place on A. V. Roe's Avro 504 N.

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THE KING'S CUP: The first away on Friday were two D.H.60 "Moths"—G-EBKT, piloted by A. J. Cobham, and G-BKU, piloted by Capt. de Havilland—shown taking off at the bottom of our picture. Above will be seen Donoghue's D.H.51A, "Come on, Steve," piloted by C. D. Barnard, and the "Airdisco" Avro (W. H. Perry), waiting for their signal to start.

D.H. 51A got away, one of the Imperial Airways D.H. 34 airliners G-E BBY took off, piloted by Colonel Minchin and carrying a number of passengers, with the intention of following the race by air. About a quarter of an hour later Bert Hinkler was despatched on A. V. Roe's Avro 504N, fitted with a 180 h.p. Armstrong-Siddeley "Lynx." Hinkler lost about three or four minutes in getting away.

It was nearly an hour before the seventh man started, this being Major Hemming in A. S. Butler's D.H. 37 "Sylvia," which carried two passengers. Then came the rain. At 8.51.21 T. W. Campbell was sent off on Sir Stanley White's Bristol "Bloodhound" (Bristol "Jupiter") after which things

began to liven up somewhat as the remaining speedier machines—Siskins, Martinsyde, Woodcock, etc.—were brought up to the starting line and given their finishing touches. The first of this batch to go was the Hawker "Woodcock" (Bristol "Jupiter") entered by T. O. M. Sopwith, and piloted by Major P. W. S. Bulman, which got away in fine style in spite of a heavy shower of rain. Next to go should have been Capt. F. T. Courtney on an Armstrong-Whitworth "Ajax" (Armstrong-Siddeley "Jaguar") entered by J. D. Siddeley, but after two attempts to get the engine running nicely it was discovered that magneto trouble had developed. So when the

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THE WINNERS: F. L. Barnard fighting his battles once again for the benefit of Sir Eric Geddes, who entered the Siskin flown by Barnard.



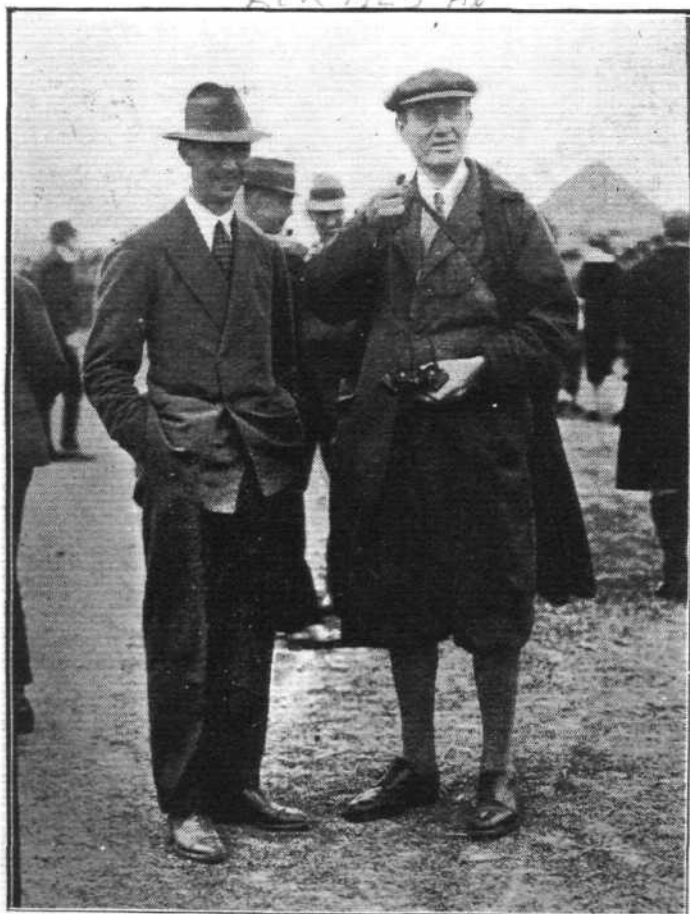
THE KING'S CUP: Mr. J. D. Siddeley discussing the progress of the race with Gen. Zagorski, chief of Polish Air Force, Mr. Richard, and Capt. Proctor (Armstrong-Siddeley).

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THE KING'S CUP: Mr. Lapin (Rolls-Royce) and Mr. Bramson (Sky-Writing) waiting for the return to Croydon of the three remaining competitors.

KCR 1925 A6

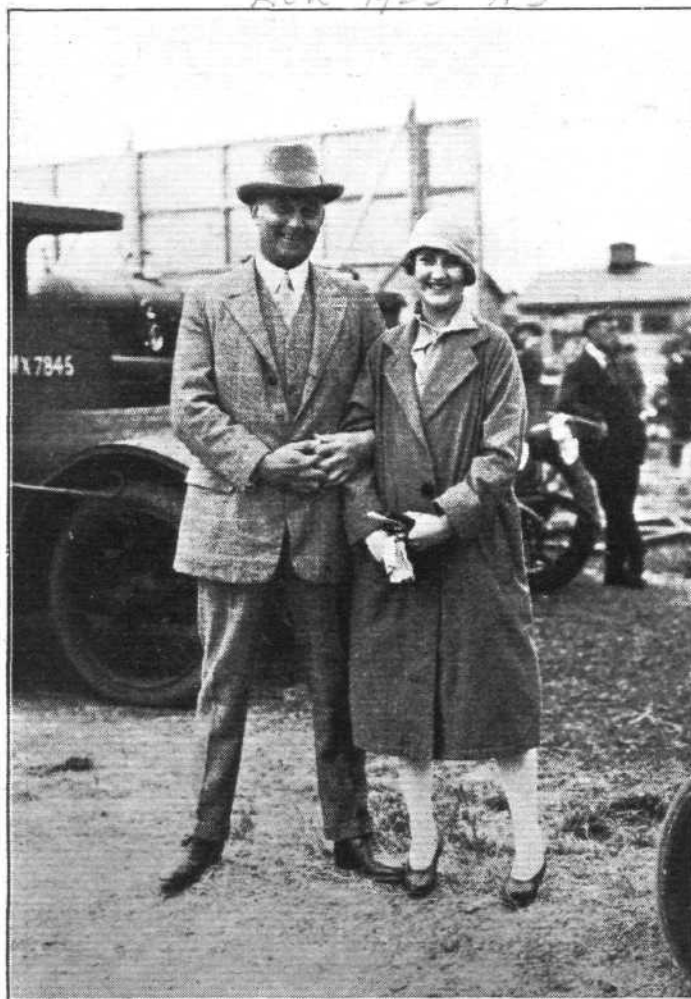


A BUSMAN'S HOLIDAY: F. P. Raynham—a former "King's Cupper"—with W. O. Manning, "looks on" for a change.

flag fell for Courtney to depart he was unable to do so, and an army of mechanics endeavoured feverishly to set matters aright. In the meantime Squadron-Leader W. H. Longton got away on the "Airdisco" Martinsyde (Armstrong-Siddeley "Jaguar") entered by Lieutenant Colonel M. O. Darby. After an interval of twenty minutes, two Armstrong-Whitworth Siskin V. machines, one piloted by Capt. J. L. N. B. Baggs, and the other by Capt. F. L. Barnard, made a simultaneous take-off, followed five minutes later by the scratch man, Flight-Lieut. H. W. G. Jones, on Sir Glynn Hamilton West's Armstrong-Whitworth Siskin IV.

Having got all the competitors away on their journey, we took the opportunity of getting a snatch of breakfast, after which we made our way to the huge board that had been erected by the Royal Aero Club for the purpose of showing the progress made by the competitors along various points of the circuit. It was a long time before any news came in from the controls, but reports came along of several early failures, all indicating that the competitors were experiencing an extremely trying time of it. It was reported that Sempill had been compelled to land at St. Alban's owing to the fog, while Cobham landed at Olney for similar reasons. A little

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THE KING'S CUP: Sir Guy Standing, the energetic and helpful Press Steward, with his daughter Katharine, await the first man home.

later on news came through that the D.H. 34 "observation bus," had passed over Harrogate, and then came reports of three more competitors down, also owing to weather conditions, at Luton. These were Bulman, Campbell, and Perry. Of these three Bulman damaged his machine in landing, and was thus put out of the race.

We next learned that Bert Hinkler found it impossible to penetrate the fog—it being, as he stated afterwards, "absolutely suicidal to attempt to continue," so he landed at Worksop and waited for the weather to clear. Borrowing a bicycle he hunted up the nearest telephone office and, for what seemed to him to be years, endeavoured to obtain from Harrogate particulars of the weather conditions further along the line. He eventually succeeded in obtaining a more or less satisfactory report and forthwith hurried back to his machine and continued his journey by air to Harrogate. It was stated also that de Havilland had landed "somewhere in England," but there was no news of Longton.

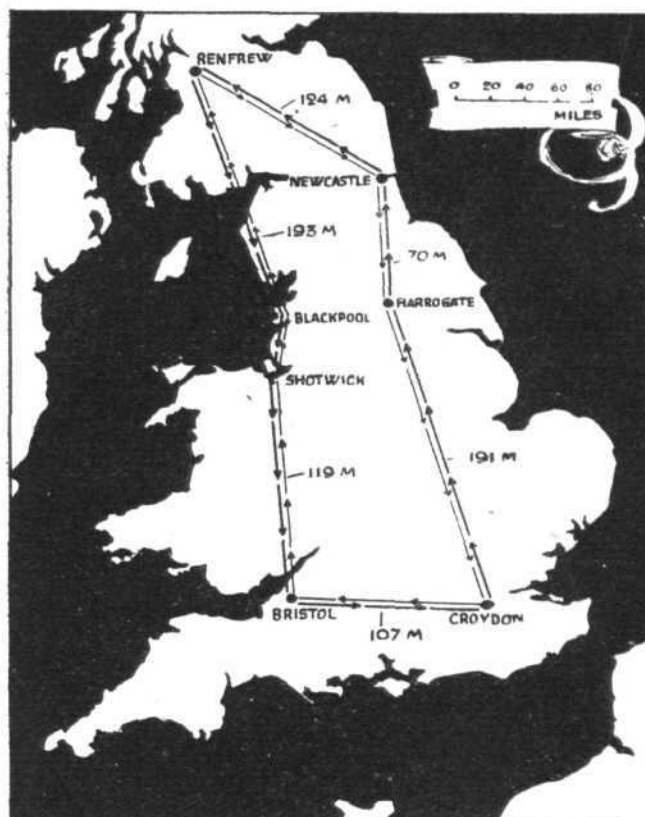
By now the monotony of hanging about was relieved by watching the sign writer writing the first reports from Harrogate of the more successful competitors. These lucky ones consisted of the two Barnards, Jones, Baggs, Courtney, Hemming and Hinkler. The rest of the afternoon, until the return of the successful competitors, to which we will refer later, was spent in watching and waiting for the reports from the various controls, and also the incomings and outgoings of the London-Continental Air Service machines—which, by the way, were not affected to anything like the same extent by the abominable weather conditions. Between 2 and 3.30, Perry, Campbell, and Sempill arrived back in the Aerodrome, having withdrawn from the race, and we also learned that the two D.H. Moths had returned to Stag Lane.

At this point we had better follow the competitors stage by stage along the course.

Harrogate, 191 miles.—Several thousand spectators assembled at the Stray, Harrogate, soon after 7 p.m. to see the competitors come in. It was not until a quarter past eleven that the first man was sighted. This was F. L. Barnard, who was accorded a rousing reception as he landed at 11 h. 17 m. 25 s., reporting appalling weather conditions, with visibility of 50 yards. At 11 h. 35 m. 51 s. Capt. Baggs, complete with "plus-eight baggs," crossed the line. Jones, the scratch man, followed seven minutes later, and made a good landing, in spite of the fact that one of his landing-wheels was damaged—apparently when taking off at Croydon. The next in was Courtney, who, besides being delayed at the start, lost time in trying to locate Harrogate in the fog. Courtney landed at 11.57. A minute or so later Bert Hinkler arrived, having waited at Workop for better conditions, as previously stated. It was nearly an hour before the next competitor arrived. This was Maj. Hemming and "Sylvia," at 12.57. Then an hour and a half later, Donoghue's mount "Come on Steve," piloted by C. D. Barnard and carrying Mrs. May and another passenger, came in, having made two stops *en route*. Only one more competitor turned up at this control—Longton—at 2 h. 47 m. 54 s. He had run short of petrol and had landed at Nottingham. All left again after the 30-mins. stop, Hinkler being delayed once again in starting, another 30 mins. Although somewhat behind, Longton decided to push on, but returned later, after having encountered a heavy storm near Durham, and retired from the race.

Newcastle, 261 miles.—F. L. Barnard, who was only

some 30 mins. behind time, was the first in here, at 12 h. 30 m. He reported bad fog all the way. Jones came in next, 20 mins. later. Then Courtney arrived, 9 mins. later, and



Sketch Map of the Course.

caused much excitement by coming to grief in a ditch in taxying across the aerodrome, and crashing the machine, fortunately without hurt to himself or passenger. At 1 h. 30 m. Hinkler came in, much behind time, but still

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1ST DAY 3RD JULY.										KING'S CUP AIR RACE.										2ND DAY 4TH JULY									
PILOTS	STARTING TIME	HARROGATE 191 MILES	NEWCASTLE 261 MILES	RENFREW 385 MILES	BLACKPOOL 537 MILES	SHOTWICK 578 MILES	BRISTOL 697 MILES	CROYDON 804 MILES	STARTING TIME	BRISTOL 107 MILES	SHOTWICK 226 MILES	BLACKPOOL 267 MILES	RENFREW 409 MILES	NEWCASTLE 543 MILES	HARROGATE 613 MILES	CROYDON 804 MILES	RESULT												
DEHAVILLAND	6:0:0	WITHDRAWN							10:0:0	11:15:0	1:16:18	2:15:0	COBHAM				2:59:23												
COBHAM	6:0:0	WITHDRAWN							10:0:0	11:25:0	1:28:30	2:31:42	HOPE				3:13:5												
JAMES									10:19:55	11:35:0	1:34:13	2:39:10	PERRY				3:27:8												
PERRY	6:45:15	WITHDRAWN							10:45:50	11:51:0	1:34:1	2:34:48	SEMPILL				3:13:15 5:26:11												
BARNARD.C	7:5:10	2:39:50	4:33:57	WITHDRAWN					11:1:8	12:2:41	1:52:12	2:46:23	HINKLER				3:24:53 5:34:16												
HINKLER	7:21:21	11:58:56	1:30:0	3:37:41		6:29:23	8:5:40	9:43:19																					
SEMPILL	6:57:53	WITHDRAWN																											
HEMMING	8:16:27	12:57:1	2:10:21	3:37:41	5:55:3	6:12:12	7:38:34	9:15:41	8:26:22	9:18:32	10:55:2	11:44:55	1:41	3:8:42	4:11:1														
CAMPBELL	8:51:21	WITHDRAWN																											
COURTNEY	9:20:9	11:57:2	1:4:45	WITHDRAWN																									
BULMAN	9:13:13	WITHDRAWN																											
LONGTON	9:28:0	2:47:54	WITHDRAWN																										
BAGG	9:48	3:55:1	2:0:14	WITHDRAWN																									
BARNARD	9:48	1:17:28	12:30:0	2:9:57	3:4	5:47:40	6:59:17	7:41	25:14	9:47	10:31:50	11:3	21:46																
JOHN	9:52	1:42:32	12:50:0	3:1:18	5:10	6:32:53	7:55:19	8:42	23:36	10:45	11:55	12:25																	

THE KING'S CUP: The progress of the race at each stage was recorded by means of the time-board shown above. To watch the artist at work was undoubtedly one of the fascinating items of the day—reports came in slowly, but were speedily posted.

smiling. Meanwhile news was received that the D.H. 34 "observation plane" had come to grief just outside, at Carville. A safe enforced descent had been made in a field, but a deep ditch at the end collected a few souvenirs of this veteran air liner, but not, fortunately, of its human cargo. Hemming arrived at 14 h. 10 m. 21 s., and 25 mins. later Baggs came in, landed, but, like Courtney, was "bagged" by the ditch, and also put out of the race. "Come on Steve" arrived two hours later and completed the list. Barnard (C. D.) was so behind time, however, that he decided to retire, thus leaving only four in the race.

Renfrew, 385 miles.—The first to reach "half-way house" was Barnard, some 2½ hrs. after he was expected. Jones came along about 50 mins. later. Hinkler and Hemming both crossed the line together—but from opposite directions, and it looked at first as if there would be only two left in the race! Here a stop was made for one hour before the competitors proceeded to Shotwick, via Blackpool Tower.

Shotwick, 578 miles.—Although Barnard was leading here, Jones had gained a few minutes from Renfrew, while Hemming got ahead of Hinkler by 17 mins.

Bristol, 697 miles.—Barnard was still leading at Bristol, and got in 45 mins. ahead of Jones, who had thus lost what he had previously gained. Hemming came in third, followed 27 mins. later by Hinkler. While waiting for the arrival of the competitors, the spectators at Filton were treated to a fine exhibition of flying by C. F. Uwins, on a Bristol Fighter.

Croydon, 804 miles.—Many more people turned up at Croydon to see the finish of the first day's race, and when Barnard arrived at 18 h. 59 m. 17 s., he got quite an enthusiastic reception as he landed. When he got out of the machine, however, he was absolutely exhausted, and had to be assisted to a seat for a short rest before he could tell of his ordeal. Jones came in second 55 mins. later, and he, too, had a sad tale to tell after receiving a hearty welcome. At 21 h. 15 m. 41 s. just as it was getting dark, Hemming returned to the fold, and looked more than glad to be back. After a wait of 28 mins.—and by then daylight had packed up—Hinkler came in with the help of landing flares, etc., and so brought a long and tiring day to a close. After landing, he decided to retire from the race, as it was useless for him to continue, seeing that he had lost so much time. In the meanwhile, the R.A.C. officials had announced that it was proposed to hold a "Consolation" race the next day, for those competitors who had fallen out of the race. Two prizes of £150 and £50 each would be offered, and five entries were received then and there—but more of this anon.

Second Day, July 4

Saturday's story is short and sweet and easily told, since but three competitors were left in the race and considerably improved weather conditions made their going comparatively easy. Once again only a few people turned up at Croydon for the start, which was not quite so early as on the first day. The first man away was Barnard on the "Siskin," his zero hour being 7 h. 41 m. 31 s. He was followed by Hemming, on "Sylvia," who, having lost so much time on Friday, left

Croydon 44 mins. 51 secs. after Barnard. Jones was still at scratch, and followed Hemming by 16 mins. 20 secs. The three remaining King's Cuppers having thus been speedily despatched, preparations were made for the Croydon Stakes Consolation Handicap. For this the King's Cup course was cut down to 520 (more than half the total distance) so as to include Bristol, Shotwick, Blackpool (turning point), and Croydon. Although this race finished after the King's Cup winner returned home, we will deal with it right away and, so to speak, get on with the horses.

At 10 a.m. the first two of the five entries were despatched. These were the two D.H.60 "Moths," with Cobham and Hope up. Perry, on the "Airdisco" Avro, went away next at 10 h. 19 m. 55 s., followed by Sempill on the D.H.51 at 10 h. 45 m. 50 s. The last off was Hinkler on the Avro 504N. The times of arrival of these five at the controls were:—

Bristol: Cobham, 11 h. 15 m.; Hope, 11 h. 25 m.; Perry, 11 h. 35 m.; Sempill, 11 h. 51 m.; Hinkler, 12 h. 2 m. 24 s.
Shotwick: Cobham, 13 h. 16 m. 18 s.; Hope, 13 h. 28 m. 30 s.; Sempill, 13 h. 34 m. 1 s.; Perry, 13 h. 34 m. 13 s.; Hinkler, 13 h. 52 m. 12 s.
Harrogate: Cobham, 14 h. 59 m. 23 s.; Hope, 15 h. 13 m. 5 s.; Sempill, 15 h. 13 m. 15 s.; Hinkler, 15 h. 24 m. 53 s.; Perry, 15 h. 27 m. 8 s. The return to Croydon was made in the following order: Sempill, 17 h. 26 m. 11 s.; Cobham, 17 h. 29 m. 33 s.; Hinkler, 17 h. 34 m. 16 s.; Hope, 17 h. 49 m. 11 s.; Perry, 17 h. 53 m. 49 s. It thus provided a fairly close finish, and in many ways made up for an otherwise somewhat dull day's sport.

Now to follow the progress of the Big Three. At Bristol Barnard was well in front, and gaining on Hemming, who came in next. Jones, however, was gaining a few minutes and going well. At Shotwick barely an hour separated Barnard, still leading, from Jones, but Hemming had dropped to third place. By the time they reached Renfrew Barnard was some 51 minutes in front of Jones, while Hemming was slowly losing ground. At Newcastle Barnard increased his lead once again to an hour, and nearly the same interval separated Jones and Hemming. Strange to say, there was not the slightest change in their position when Barnard and Jones arrived at Harrogate, but Hemming lost another five minutes or so.

Thus it was, that at 16 h. 0 m. 29 s. Barnard hurtled into Croydon and, for the second time, won the King's Cup. He made an excellent landing, and as the machine was brought up to the enclosure the fairly large crowd that had by now assembled to see the finish rushed forward and greeted him with hearty cheering. Once out of the machine he was carried shoulder high to the Cup, which the Duke of Sutherland presented to the successful entrant, Sir Eric Geddes, who handed it, with a few words of thanks, to Barnard. Just 1 h. 23 m. 16 s. after Barnard crossed the line, Jones—now Squadron-Leader according to that day's *Gazette*—got home, and he, too, was given an enthusiastic reception. The proceedings were brought to a close at 6.10 p.m. by the return home of Hemming, who had, it was admitted by all, put up an extremely plucky and creditable performance.

And so ended our first Eliminating Air Race!



ADVANCED TRAINING MACHINE: This Bristol biplane with Bristol Jupiter engine is used at the Bristol Flying School for the advanced training of pupils, and as such is, perhaps, the highest-powered training machine in regular use. For school purposes, however, the speed of the Jupiter is cut down to a certain figure, so that the actual power normally developed when used in a school machine is not the full power of the engine.

THE ORIGINAL AVRO TRIPLANE FOR SOUTH KENSINGTON MUSEUM

THE presentation, by A. V. Roe & Co., Ltd., of the original Avro triplane to the South Kensington Museum, where it will be kept for the nation for all time, brings back some interesting recollections of its constructor, that pioneer of aviation, Mr. A. V. Roe.

The first flight ever made over British soil was made by A. V. Roe, in a machine of his own construction. Appropriately enough, Roe, we are reminded, obtained his first incentive to design aircraft from watching birds in flight. During three years he spent in the merchant service as a marine engineer he studied the seagulls and the albatross, and on his return commenced to make model gliders.

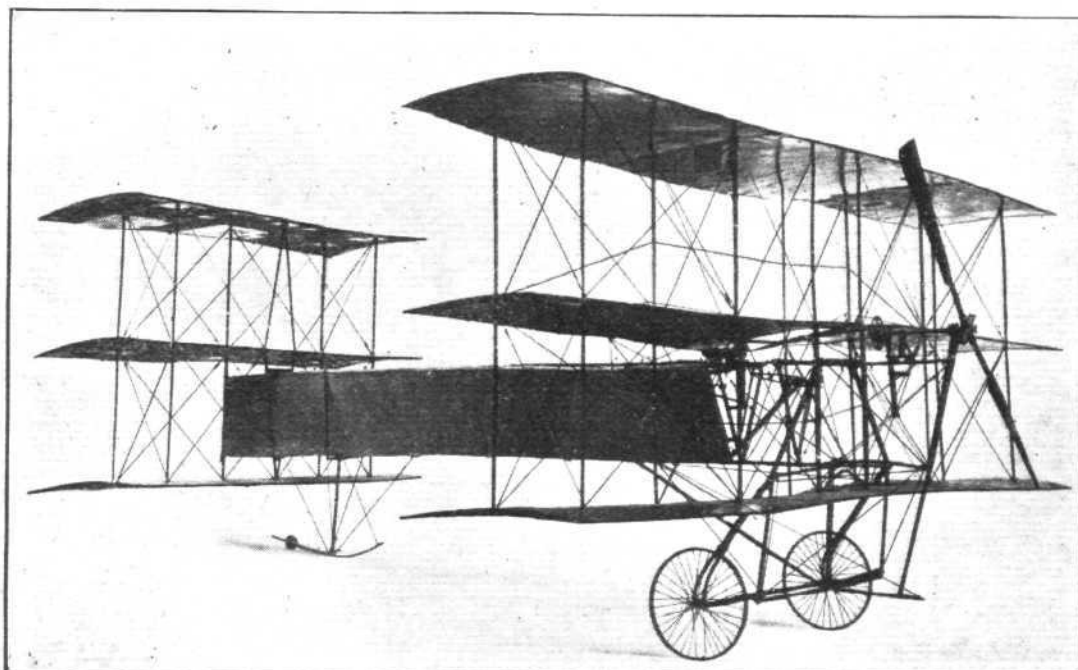
From 1906 onwards, Mr. Roe devoted all his time and savings to aviation. In 1907 he won the first *Daily Mail* prize for flying models and constructed a full-size flying machine, which he took to the Brooklands motor track. He was kept waiting many months for a 24 h.p. Antoinette engine he had ordered from France, and in the interval it was his practice to prevail upon sympathetic motorists to give him experimental towing flights. It was difficult, Mr. Roe says, to induce

With this he made the first successful flight on an all-British aeroplane. This was in June, 1909, and for fourteen years the machine held the record of being the lowest-powered engine to fly in England.

After this he made many successful flights, the earliest being short and low, earning him the title of "Roe the hopper." One of his troubles at this period was the back firing of the J.A.P. engine, which occasionally set his machine on fire.

In the summer of 1909 a young woman came down to the river Lea intending to commit suicide. The sight of Roe's machine skimming about arrested her, and she went home. The next morning Mr. Roe received a letter asking him to allow her to take his place as pilot of the machine so that his life might be saved at the expense of her own. Roe tactfully replied that he would gladly allow her to fly his machine when he had perfected it, thus giving her something to look forward to.

Roe was not left in peace to carry out his experiments. The local authorities employed a bailiff to watch him and to prevent him from flying. For a long time the bailiff was



The original Avro Triplane, which has been presented to South Kensington Museum.

the motorists to let go at the proper moment when the machine began to swerve in the air, and the result of their holding on often ended in a dive and a crash.

In the spring of 1908 the Antoinette engine arrived from France, and on June 8 Roe made the first flight ever accomplished in England. This consisted of some 60 yds. at a height of 2 ft. from the ground.

At this point he received notice to quit Brooklands. He had never enjoyed anything like ideal conditions. He was not allowed to sleep in the shed where his machine was kept, nor could he use the track when it was open to motorists. Still his entire exclusion was a severe blow.

He applied to the War Office for leave to erect a shed by the side of Mr. Cody's at Laffan's Plain, but was refused permission. He finally decided to continue on Lea Marshes, where some large fields were available. He also rented and boarded up a couple of railway arches in the vicinity.

In the stable of his brother's house at Putney he had by this time constructed a tractor triplane, and this is the machine which has been presented to the Science Section of the South Kensington Museum. This he removed to Lea Marshes. Circumstances had compelled him to dispose of his Antoinette engine of 24 h.p., and he had nothing better than a 9 h.p. J.A.P./motor-cycle engine designed by John Alfred Prestwich.

circumvented because of Roe's early-rising habits, but eventually he was caught in the act. Police court proceedings were instituted, but just then Bleriot flew the Channel and the case was dropped.

Roe moved on to Wembley Park, now the site of the British Empire Exhibition, and flew with consistently increasing success. In 1910 he entered into partnership with his brother in Manchester and in the same year was welcomed back to Brooklands. After a visit to America the famous Avro machine, so named after its inventor, was produced, and from then onwards Roe reaped the success he deserved.

Early in 1914 the German Government bought an Avro seaplane, which was the first heavier-than-air machine to make the voyage from the main land to Heligoland.

The part the Avro played in the Great War is well known. In the early days it raided the airship sheds of Friedrichshafen, and, handled by Commander A. W. Bigsworth, it was the first British machine to damage a Zeppelin in the air. Throughout the war, and to this day, it has been the standard training machine of our Flying Services.

Since the war the firm of Avro has been linked up with the manufacturers of the Crossley car, a fitting alliance, as they worked together through the war, Crossley cars as land transport for the R.A.F. and Avro machines in the air.

The King and Amundsen

CAPTAIN AMUNDSEN, who returned on the *Dornier Wal* to Oslo, on July 4, received the following telegram from King George V., on July 7:—

"My heartiest congratulations upon your safe return from your flight to the Polar region. I trust that you and your companions have not suffered from privations during your heroic flight.—GEORGE R.I."

THE ZENITH OF SUCCESS

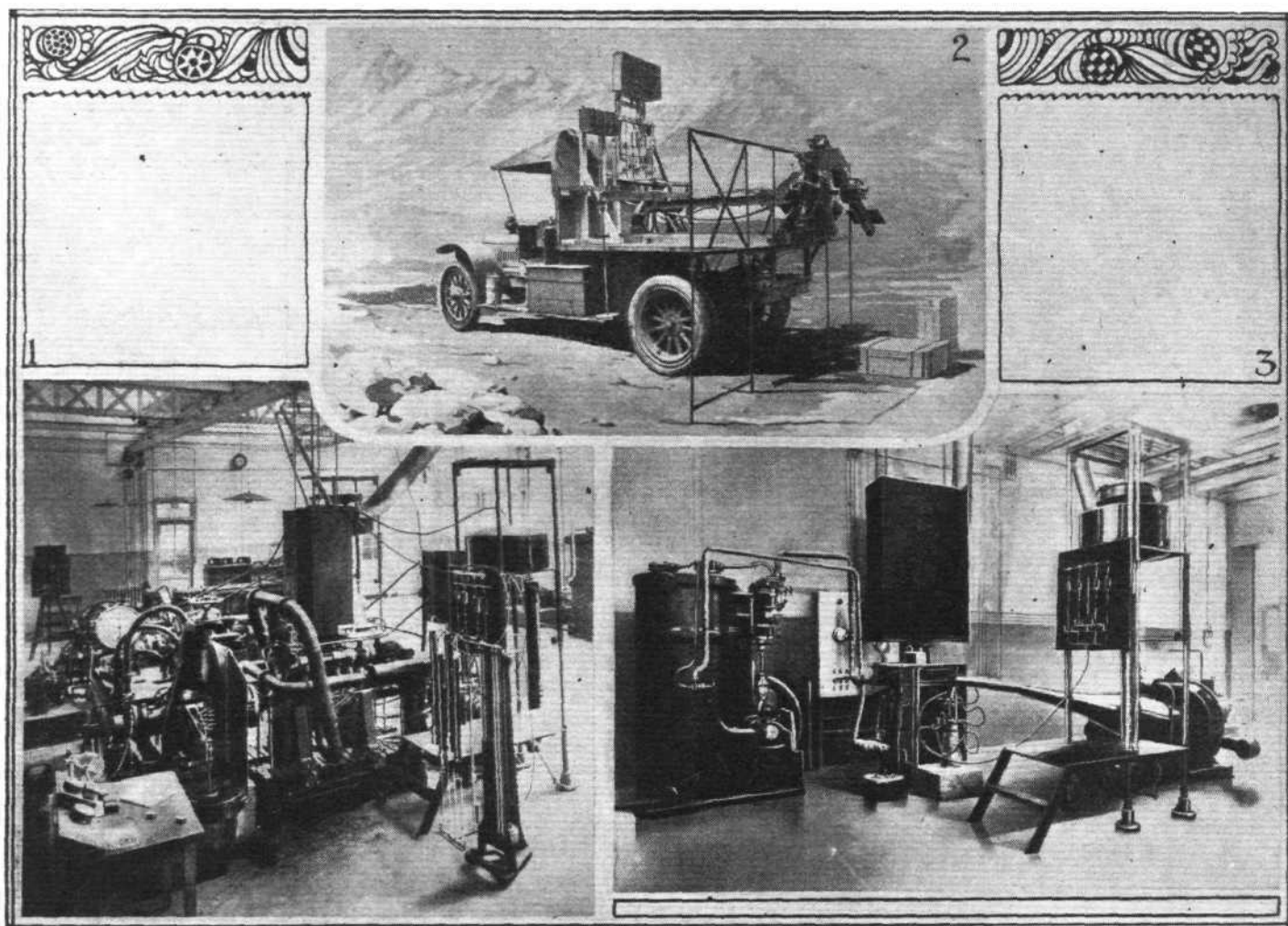
WHENEVER a big aviation event takes place attention is often drawn to certain components that have contributed towards the success that has been achieved in that event by any particular machine—and it must not be forgotten that however perfect may be the design and construction of an aeroplane and its engine, its success may often be marred by the failure of some secondary, but none the less important, component, such as the carburettor, magneto, or some instrument. When, therefore, we find that one successful event after another is associated with the use of such-and-such a component, we are entitled to assume that we have in that component one possessing a degree of reliability which will enable the aircraft designer to "go ahead" with his ideas without fear of being let down by some "minor" detail outside his own particular design.

Reviewing many of the past aviation events, it would seem

Newman Street, London, W. 1—has not merely established a well-equipped factory just for producing carburettors, but it also maintains in conjunction with the factory, an equally well-equipped laboratory at Lyons, where all problems appertaining to carburettors are investigated.

Another interesting point worthy of mention is that in addition to the general research work done in the laboratory, the Zenith company also carries out careful tests and experiments with carburettors fitted to practically every new engine that comes along. Thus, they are able to produce a carburettor that is especially suitable for use on any particular engine. This is, we think, an extremely important matter, for, in effect, it means that the carburettor is designed or adapted to meet the requirements of any individual type of engine.

We are, unfortunately, unable in the space at our disposal,



THE ZENITH LABORATORY AT LYONS: (1) One of the Froude-brake test benches specially installed for tests at different altitudes and at low temperatures. (2) A portable installation used for tests in the mountains at Lautaret and Galibier. (3) This installation is for testing carburettors at low temperatures and with any desired degree of humidity, but without engine.

that the "Zenith" carburettor is one such component, possessing this reliability to some considerable extent, in addition to many individual features. So many successes have been associated with the name Zenith that its reputation amongst the majority of aircraft designers is accepted without question. We wonder, however, how many realise how this satisfactory position has been attained.

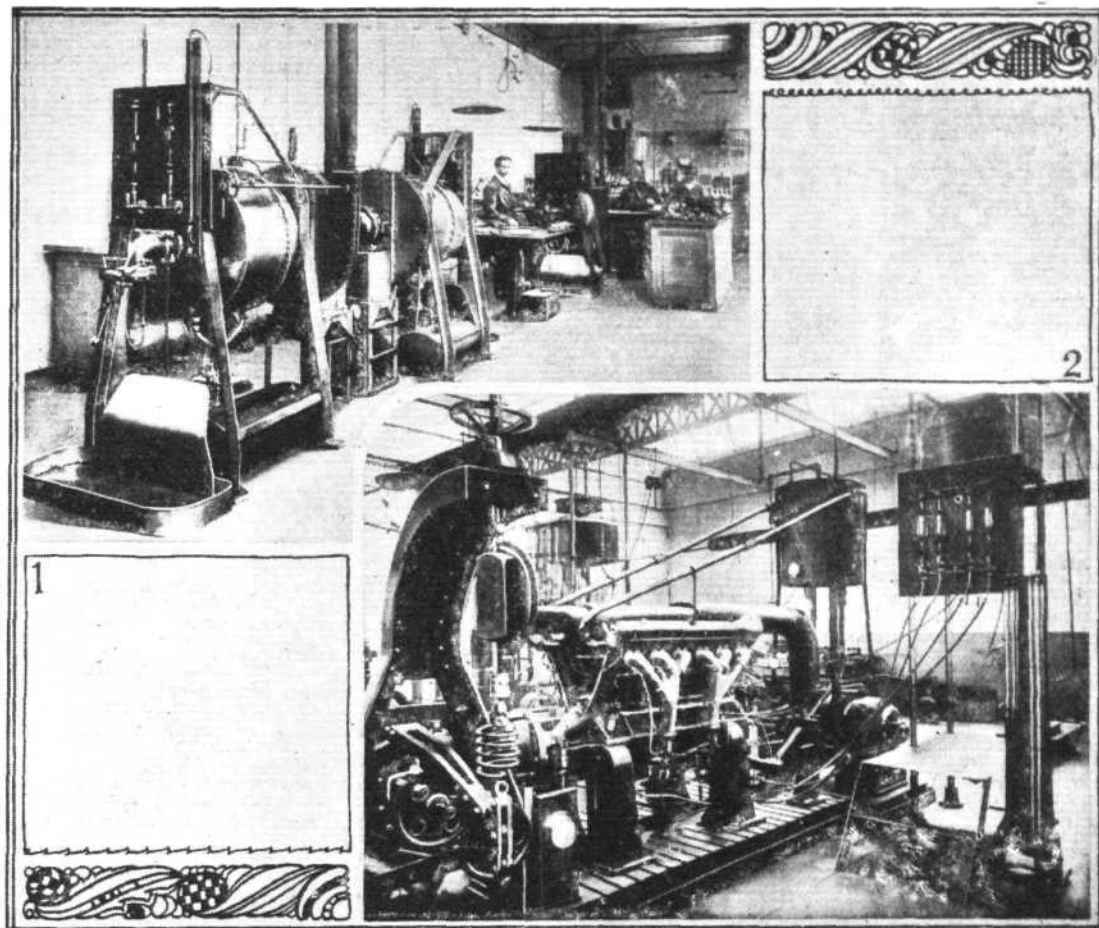
It came, we must admit, somewhat as a surprise to us when we became acquainted with certain facts, which we propose relating herewith, dealing with the method employed by the Zenith firm in the production of their famous carburettors.

Briefly stated, the results obtained have been arrived at only by an extremely comprehensive and elaborate system of laboratory and research work combined with very thorough tests carried out under a great variety of conditions. In other words, the Société Zenith of France—which is represented in this country by the Zenith Carburettor Co., Ltd., of 40-42,

to give a detailed description of the Zenith laboratory at Lyons, and of the work carried on there. For the present we can only refer to one or two of the essential features and publish illustrations of some of the more important sections of the laboratory.

The Zenith firm commenced this research section some twelve years ago, and since that time, laboratory work, together with tests in flight, have continued without interruption. In the laboratory are three Froude brakes, which enable powers to be measured up to 1,000 h.p. and any type of engine may be "operated on." These brakes are fed with water under constant pressure, and are provided with electric starters. One of these test benches is shown in illustration No. 1 above. In this installation a special apparatus has been provided for tests at different altitudes and at low temperatures. The carburettors of the 400 h.p. engine shown installed take their air from a reservoir mounted above the engine, the air being fed to the reservoir by inclined

The Zenith Laboratory at Lyons: (1) The "Super-Controle" section, where all Zenith carburettors, after leaving the factory, are checked as regards consumption of petrol, etc. (2) Another of the Froude brake test benches.



channels or manifolds from the roof. The reservoir contains a carbonic acid cooling apparatus by means of which it is possible to lower the temperature of the air to any desired degree. Furthermore, the air may be brought to any desired state of rarefaction by means of a system of automatic valves at the outlet of the cooling apparatus. The exhaust of the engine is led to a strong exhaust box, of ample proportions, situated on the roof of the laboratory.

A Rateau turbine, driven by an electric motor, is also provided, by means of which it is possible to regulate the pressure (or degree of vacuum) in the exhaust muffler corresponding to an altitude of 6,000 m. In short, the whole installation is so arranged, as regards induction, exhaust, petrol supply, measuring apparatus, etc., that it "functions" at the pressure corresponding to the altitude at which the test is desired to be made.

Illustration No. 2 shows a portable installation with which similar tests were made by the Zenith Company in the mountains at Lautaret (some were also made at Galibier), which tests demonstrated the necessity for altimetric corrections. In fact, it was as a result of these tests that the installation at the laboratory previously described was introduced.

The Zenith Company has also recently constructed another installation, shown in illustration No. 3 (p. 342), by means of which it is possible to test carburettors at low temperatures and with any desired degree of humidity, without employing

the engine. The carburettor is connected to a special fan or suction device, which gives the same gas velocities as in an engine. If desired, the gases can be heated by water circulation—the water itself being electrically heated. Duration tests can thus be made without fear of engine trouble, and it is possible to follow all the phenomena of freezing inside carburettors. Thanks to this installation, the Zenith Company has been able to solve the problems arising out of the question of the heating of aero-engine carburettors.

A physical laboratory specially devoted to a study of the flow of gases and liquids, and a chemical laboratory, well equipped for the analysis of fuels and exhaust gases, complete the sections to be found in this remarkable, and, we think, unique, Zenith laboratory—the establishment of which has called for considerable work, time, and money, since almost every item in the laboratory possesses some special feature necessary for the work for which it is intended.

In conclusion, it should be noted that besides the research work referred to above, the establishment at Lyons also includes the usual test sections connected with the factory, where the finished carburettors are passed as "physically fit." Our illustration No. 1, above, for instance, shows the "Super-Controle," where every carburettor, after leaving the factory, is checked in regard to petrol consumption, in order that each carburettor of any particular type may be rendered absolutely standard and interchangeable.

The R.A.F. at Bisley

OWING to the unavoidable absence, on July 1, of Air Marshal Sir Hugh Trenchard, Air Commodore Longcroft presented the prizes won by the R.A.F. in the preliminary contests, and in doing so prophesied that the Air Force of the future will be a potent rival of the other Services. The Air Force novices, will, no doubt, with practice and encouragement, yet fulfil the Air Commodore's prediction. Results: The Tyro Rifle Match (10 rounds snap at 300 and five deliberate at 600 yards).—1. Sergt. King (Sealand), 57 points; 2. L.A.C. Level (Felixstowe), 57; 3. Corpl. Lidiard (Duxford), 56; 4. Sergt. Austin (Felixstowe), 56; 6. L.A.C. Potter (Cranwell), 54; 7. A.C. Roberts (Eastchurch), 50; 8. L.A.C. Rayner (Gosport), 50; 9. L.A.C. Slade (Sealand), 50.

Pistol (Automatic) Championship.—Three practices; h.p.s., 105 points.—1. (Halahan Challenge Cup), Wing-Commr. Grant-Dalton, Uxbridge; 2. Flight-Lt. Pearce, Cranwell;

3. Flying Offr. Stainforth, Duxford; 4. Flight-Lt. Calvey, Uxbridge.

R.A.F. Revolver Twenty Cup.—Wing-Commr. Barton, Cranwell; 2. Wing-Commr. Grant-Dalton, Uxbridge; 3. Flight-Lt. Calvey, Uxbridge; 4. Flying Officer Drummond, Cranwell.

New York and Chicago Night Air Mail Services

THE inauguration of a Night Air Mail Service between New York and Chicago, took place on July 1. This line covers a route of 774 miles from Hadley Field, New Brunswick, N.J., to Maywood Field, Chicago. Emergency landing grounds are indicated every 25 miles along the route by 5,000,000 candle-power searchlights. The west-bound machines covered the distance in 8½ hours against stiff head winds, while the eastward aeroplanes took less than seven hours. The Postmaster-General and a large crowd witnessed the departure from New Jersey, and Gen. Dawes, the Vice-President, was in attendance at the Chicago ceremonies.

IN PARLIAMENT

Cattewater Seaplane Station

SIR PHILIP PILDITCH, on June 29, asked the Secretary of State for Air if he is aware that the promontory of land known as Mount Batten, and forming part of the shore of Plymouth Sound, which is to be taken over by the Air Ministry under the Cattewater seaplane station scheme, is the piece of land along which Drake warped the British Fleet out to gain its position to windward of the Spanish Armada; and whether he will take effective steps that the features of the land so historically valuable shall not be interfered with?

Sir Samuel Hoare: I am aware that there are historical associations connected with Mount Batten promontory and the Sound. I have no reason to think that they are likely to be interfered with in any way as the result of the Air Force occupation of the station. No further construction work is at present contemplated.

North Africa to Cape Town Flight

SIR F. SYKES asked whether progress is being made with the preparations for a flight from North Africa to Cape Town; how many, and which, of the landing grounds employed on previous flights on the route are to be reconditioned for this flight; what is the estimated cost of such reconditioning; and what was the estimated annual cost to the Treasury of maintaining those landing grounds at the time of the last flight made?

Sir S. Hoare: The answer to the first part of the question is in the affirmative. As regards the second and third parts the arrangements are not sufficiently advanced to state how many and which of the previous landing grounds will be used, but it is anticipated that the cost of clearing away scrub and the like will be small. The last part of the question cannot be answered until it is known which landing grounds are concerned.

Airships

MR. VIANI asked the Secretary of State for Air if he will give the cost incurred in reconditioning the R.33 prior to April last; for these experimental purposes, what was the cost of one charge of hydrogen gas; the cost, including fittings, of the scientific instruments on the airship; the cost of civilian labour employed in getting the airship out of her base at Cardington on April 2 last and finally into the hangar at Pulham on April 17; and the cost of repairing the mast at Pulham?

Sir S. Hoare: The answer to the first part of the question is £28,800; to the second, approximately, £1,000; and to the third, £521. As regards the fourth part of the question, the cost of the civilian labour for the two operations referred to was £66 and £193 respectively, the latter sum including payment of a party which stood by for part of the night. As regards the last part of the question, as the repairs have not yet been carried out and as they may embody various improvements which are under consideration, it is not possible to state the cost involved.

Mr. Viani asked what service is being performed by the existing British airship fleet (excluding the R.33 now under repair); what voyages have been undertaken since 1921 by the R.37, R.80, L.64, and L.71; what was the original cost of the R. vessels, R.33, R.34, R.35, R.36, R.37, and R.38; by whom were these airships constructed; and what is the total mileage of the flights of each airship?

Sir S. Hoare: As regards the first part of the question, the only airships in existence are the R.33 and R.36; these two airships are being reconditioned for aerodynamic and semi-tropical trials in connection with the airship programme. As regards the second part, no voyages have been undertaken by the airships referred to since 1921, flying operations by airships having been suspended in that year. As regards the third part, the approximate cost of the R.33, R.34, and R.36 was £350,000 each. The R.35 and R.37 were not completed, and the approximate expenditure upon them was £75,000 and £325,000 respectively. The cost of the R.38 was chargeable in part to the American Government, and exchange fluctuations make it difficult to give a figure, but the cost may be taken as approximately £500,000. As regards the fourth part of the question, the R.33 and R.35 were constructed by Messrs. Armstrong, the R.34 and R.36 by Messrs. Beardmore, the R.37 by Messrs. Short Bros. and the Royal Airship Works, Cardington, and the R.38 by the Royal Airship Works, Cardington. As regards the last part, the hours flown by R.33, R.34, R.36, and R.38 were 800, 500, 97, and 70 respectively. No flying was done by the R.35 and R.37.

Air Liaison Officer

SIR F. SYKES, on July 1, asked the First Lord of the Admiralty whether the officer appointed for liaison duties with the Air Ministry deals, and is qualified to deal, with both the technical and the broader aspects of airship development; and whether he, or any other suitably qualified naval officer, has been appointed to the airship co-ordinating sub-committee of the Aeronautical Research Committee?

Mr. Bridgeman: As regards the first part of the question, the liaison officer referred to, whilst he has dealt in the ordinary course of his duties with such questions as the type of mooring mast best suited for installation in naval craft, was not appointed to deal with airship development, but with certain technical questions of common interest to the Navy and Air Force in connection with ships' fittings. The answer to the last part of the question is in the negative, but I am informed by the Air Ministry that the Committee in question is composed of independent technical experts, and neither the Navy nor the Air Force is represented upon it.

R.A.F. Accidents

SIR F. SYKES asked the Secretary of State for Air if he will state in regard to Royal Air Force flying accidents at home and abroad, respectively, the

numbers attributable, during the period April 1, 1924, to May 31, 1925, to engine or installation failure; error of judgment on the part of the pilot; combination of engine failure and error of judgment; defect in aircraft construction; defect in aircraft design; defect in aircraft maintenance; and other causes?

Sir S. Hoare: The figures asked for are:—

Causes.	Number of Accidents.		
	Home.	Abroad.	Total.
1. Engine or installation failure	17	8	25
2. Error of judgment	89	53	142
3. Combination of engine or installation failure and error of judgment	15	8	23
4. Defect in aircraft construction	2	3	5
5. Defect in aircraft design	7	—	7
6. Defect in aircraft maintenance	1	—	1
7. All other causes	29	42	71
	160	114	274

Aircraft Names

SIR HARRY BRITAIN, on July 2, asked the Secretary of State for Air whether, following the example of the Navy, he will consider the suggestion that the larger planes and, in due course, British airships bear names instead of numbers, and commemorate, among others, pioneers in the aeronautical world?

The Under-Secretary of State for Air (Major Sir Philip Sassoon): My hon. friend's suggestion will be favourably considered as regards airships, but it could not, I think, be applied satisfactorily to aeroplanes, since it would be almost impossible to differentiate between them on the basis of size, and the types, moreover, are of great variety and are constantly being modified and changed.

R.A.F. Reviews

SIR H. BRITAIN asked the Secretary of State for Air whether he can see his way to arrange occasional reviews of the Royal Air Force in other parts of Great Britain as well as at Hendon to enable many who are unable to visit London to see something of British aerial development?

Sir P. Sassoon: The majority of the aerodromes of the Royal Air Force are at present so far removed from the larger centres of population that it would be difficult to carry out the suggestion contained in my hon. friend's question. It will, however, be carefully borne in mind and I hope it may be possible to put it into practice when further progress has been made with the preparation of the new stations which are being opened in connection with the scheme of home defence and the development of the Auxiliary Air Force.

Captain Brass: Is it not a fact that these pageants or demonstrations are very excellent practice for the Air Force?

Sir P. Sassoon: Yes. They are the culmination of their training.

Hendon Display

CAPTAIN BRASS asked the Secretary of State for Air the number of persons who attended the recent Air Force demonstration at Hendon; and how many machines were employed?

Sir P. Sassoon: The attendance at the Aerial Display on Saturday last is roughly estimated at 100,000, but it is impossible to give an accurate figure until the returns from the advance booking agencies throughout London have been received. The number of machines employed was 137.

Captain Brass: Is it not a fact that this is the largest number that has ever attended Hendon and the finest demonstration the Air Force has ever made, and that they are to be heartily congratulated?

Mr. Thurtle: Did any casualties take place at this pageant?

Sir P. Sassoon: No, there was none.

Sir H. Britain asked whether efforts have been made to discover the individual who prevented the wireless signals being received during the Aerial Pageant; and whether, if these efforts are successful, the individual in question will be dealt with by the legal authority?

Sir P. Sassoon: I am afraid that owing to technical difficulties nothing can now be done to trace the individual responsible for this very regrettable interference.

Air Mail Service to India

LIEUT.-COMMANDER KENWORTHY asked what progress has been made in the development of a regular air mail to India; when he expects an air mail service to India to be put into regular operation; what portion of the route will be covered by air and what proportion by other means of transport; and what is the expected saving in time?

Sir P. Sassoon: In reply to the first and second parts of the question, I am not yet in a position to add to my reply to my hon. and gallant friend the Member for Hallam on June 11. As regards the third part, it is intended that the Kantara-Karachi portion of the route should be covered by air. As regards the last part, the saving in time is expected to be from five to seven days on correspondence to different parts of India.

Lieut.-Commander Kenworthy: When does the hon. gentleman expect the service to begin?

Sir P. Sassoon: Civil undertakings have been asked to provide schemes for a weekly service between Kantara and Karachi, and we hope it will begin, without any delay, at a very early date.

Personals

To be Married

The marriage arranged between Flying Officer IAN A. BERTRAM, R.A.F., and Miss DOROTHY ELIOTT-LOCKHART will take place at Christ Church, Lanark, on Tuesday, August 25.

A marriage has been arranged between Flight-Lieut. ARTHUR GARRITY, R.A.F., elder son of the late Mr. Arthur Garrity and Mrs. Garrity, of Rochester, and DOROTHY, only

daughter of the late Mr. J. GETHING HANCOCK and Mrs. GETHING HANCOCK, of 40, Bramham Gardens, S.W.

The engagement is announced between JOHN SYDNEY HUGHES, late R.A.F., eldest son of the late Mr. John Hughes and Mrs. Hughes, of Bournemouth, and HENRIETTA ALINE, youngest daughter of the late Mrs. H. V. STUBINGTON, The Priory, Westward Ho!

R.A.F. Flying Accident

THE Air Ministry regrets to announce that as a result of an accident at Duxford to an Avro of No. 19 Squadron,

Duxford, on July 2, Flying Officer Herbert Vincent Kerckhove, M.C., the pilot of the aircraft, was dangerously injured and died shortly afterwards.

THE ROYAL AIR FORCE

London Gazette, June 30, 1925.

General Duties Branch

The follg. are granted permanent commissions in ranks stated (July 1):—
Flight Lt.—B. R. Carter, A.F.C. FLYING OFFICERS.—M. H. Ely, F. F. Inglis (Lt., Duke of Cornwall's L. Infy.), J. Marsden.

Pilot Offr. J. C. Hill is promoted to rank of Flying Offr. with effect from May 10, 1924, and with seny. of Nov. 10, 1923 (substituted for Gazette, Nov. 18, 1924, and April 7 and 24, 1925); Pilot Offr. on probation W. E. Symonds is confirmed in rank (May 26); Wing Comdr. A. H. Wynn Elias Wynn, O.B.E., is placed on retired list at his own request (July 1); Flight Lt. H. J. Edgar is placed on retired list at his own request (July 1). The follg. Flying Offrs. are transferred to the Res., Cl. A.:—A. L. Harris and G. C. Selater (June 28); F. J. Brunton (June 30). Pilot Offr. F. H. Farrow resigns his short serv. commn. (July 1).

Stores Branch

Flight Lt. H. W. Clarke is transferred to Res., Cl. C. (June 17) (substituted for Gazette, June 16).

Reserve of Air Force Officers

The follg. are granted commn. on probation in Class A, General Duties Branch, in the ranks stated (June 30):—FLYING OFFR.—H. Lawson. PILOT OFFR.—A. Prescott.

The follg. are confirmed in rank:—Flying Offr. P. Smallwood (June 11); Pilot-Offr. C. W. Sutcliffe (June 30). Flight Lt. C. H. B. Thompson is transferred from Cl. D2 to Cl. D1 (June 25); Flying Offr. I. C. G. Simpson is transferred from Cl. A to Cl. C (June 13).

Memoranda

Maj. A. C. H. MacLean, C.B.E., R. Scots Regt., is granted the rank of Col., R.A.F., on retirement from the Army (June 3); the permission granted to Lt. H. G. Owen to retain his rank is withdrawn on his enlistment in the T.A. (May 19); Flying Offr. H. H. Fell relinquishes his temp. commn. in the Electrical Serv. Works Coy. (May 1).

HALF-YEARLY PROMOTION LIST

The Air Ministry announces:—

The undermentioned are promoted with effect from July 1, 1925:—

General Duties Branch

Air Commodores to be Vice-M Marshals.—Charles Alexander Holcombe Longcroft, C.B., C.M.G., D.S.O., A.F.C.; Tom Ince Webb-Bowen, C.B., C.M.G.

Group Captains to be Air Commodores.—Lyster Fettiplace Blandy, C.B., D.S.O. (Lt.-Col. Reserve List, R.E.); Ian Malcolm Bonham-Carter, C.B., O.B.E.; Felton Vesey Holt, G.M.C., D.S.O.

Wing Commanders to be group Captains.—Charles Edward Henry Rathborne, D.S.O., Charles Raymond Strathern Bradley, O.B.E.; Cuthbert Trelawder Maclean, D.S.O., M.C.

Squadron Leaders to be Wing Commanders.—Philip Babington, M.C., A.F.C.; George Ranald Macfarlane Reid, D.S.O., M.C.; Roderic Maxwell Hill, M.C., A.F.C.; Bertrand Lawrence Huskisson, D.S.C.; Charles Frederick Algernon Portal, D.S.O., M.C.; Charles Hubert Boulby Blount, O.B.E., M.C.; Roland James Mounsey, O.B.E.; Ernest William Norton, D.S.C.; Alfred Guy Roland Garrod, M.C., D.F.C.; Conway Walter Heath Pulford, O.B.E., A.F.C.; George William Williamson, O.B.E., M.C.; Gilbert George Herbert Cooke, D.S.C., A.F.C.; Dudley Stuart Kays Crosbie, O.B.E.; Richard Beauchamp Maycock, O.B.E.

Flight-Lieutenants to be Squadron-Leaders.—Alfred Hugh Stradling, O.B.E.; Charles Edward Henry Cardew Macpherson; Archibald Spencer Maskell; Brian Edmund Baker, D.S.O., M.C., A.F.C.; Francis Henry Coleman; Kenneth Malise St. Claire Graeme Leask, M.C.; Arthur Norman Bengie; Hubert Wilson Godfrey Jones, M.C.; Cyril Nelson Lowe, M.C., D.F.C.; Robert Henry Magnus Spencer Sandby, M.C., A.F.C.; Athol Wordsworth Mylne; John Kenneth Summers, M.C.; Ernest Leslie Howard-Williams, M.C.; Donald Fasken Stevenson, D.S.O., M.C.; Francis Reginald Alford, M.C.; George Elliot Godsaver; Gerald Edward Livock, D.F.C.; Hon. Ralph Alexander Cochrane, A.F.C.; Ralph Sleigh Booth, A.F.C.; John Beresford Cole-Hamilton; Jack Noakes, A.F.C., M.M.; John Keith Waugh, D.S.C.; Arthur Deen Pryor; Rollo Amyatt de Haga Haig, A.F.C.; Edward Brownson Rice; Richard Gregory Gardner, D.S.C.; Wilfred Reginald Dyke Acland, D.F.C., A.F.C.; Francis John Vincent, D.F.C.; Frank Fowler, D.S.C., A.F.C.; Robert Halley, D.F.C., A.F.C.; Archibald Graham Weir; William Alec Coryton, M.V.O., D.F.C.

Flying Officers to be Flight Lieutenants.—Leslie Arthur Cooke Stafford; Rene John Max de St. Leger; Rupert Chandos Bryant; Brian Alexander Spencer Lewin; William Eyles Knowlden (Lt., Border Regt.); George

Frederick Moody; Garth Richard O'Sullivan; William George Edward Hayman; Aleth Thomas Septimus Leguen de Lacroix; Frank Carpenter; Charles Darley Pyne; Thomas Alfred Thornton; Albert Edward Woodbridge; Guy Mainwaring Knecker; Cecil Herbert Harrison; Howard Charteris Black; Arthur Ferguson Ingram; John Malcolm Glaisher, D.F.C.; Adrian Henry Paull; William Catchpole, A.F.C.; Christopher George Halliday; Leonard Edward Moreland Gillman; Richard Grice, D.F.C.; Thomas Stanley Horry, D.F.C.; Maurice Michael Freehill, D.F.C.; Christopher Tom Walkington; Percy Jack Clayton, M.C., D.F.C.; Aubrey Freeland White; Charles Howard Cahill; George Stacey Hodson, A.F.C.; Cyril Richard Smythe; Sydney Trevor Brander Cripps, D.F.C.; John Francis Titmas; John Astley Gray, D.F.C.; Adrian Winfred Franklyn, M.C.; Arthur Reginald Jones; Hugh Lewis Pingo Lester; James Rupert Francis Randell, D.F.C.; Charles Edwin Horrex, A.F.C.; Francis Hugh Ronsley, M.C.; Willett Amalie Bowen Buscarlet; Frank Grenville Argyle Robinson; Howard Wilfred Clayton; Henry Edward Forrow; Ronald Ivelaw Chapman, D.F.C.; Charles Edward Hamilton Allen, D.F.C.; John Wyntoun Turton Jones; Graham Clarke Bladon; Dudley Lloyd Evans, M.C., D.F.C.; Herbert Gifford Sawyer, A.F.C.; Wilfred Sanderson, A.F.C.; Charles Edward Barraclough; Matthew Crawford Dick; Thomas Cathcart Traill, D.F.C.; Herbert William Heslop; Herbert John Tuson Russell; Gordon Archer; Harold Walter St. John, D.F.C.; Albert Edward Case; Edgar James Kingston-McCloughry, D.S.O., D.F.C.

Stores Branch

Squadron Leader to be Wing Commander.—Francis Cartwright Williams, O.B.E.
Flight Lieutenant to be Squadron Leader.—Frank Tedman, M.B.E.
Flying Officers to be Flight Lieutenants.—Lawrence Haydn Hillier; James London; Ernest Alfred Tottle.

Accountant Branch

Squadron Leader to be Wing Commanders.—Charles Percy Ogden, O.B.E.; Thomas Henry Evans.
Flight Lieutenants to be Squadron Leaders.—Ernest Noel Edward Waldron; Arthur Roy Thomas; Thomas Coates Miller, M.C.
Flying Officers to be Flight Lieutenants.—John Christopher Brice; Wilfred Edmund Ennis; Alfred William Gray; Joseph Baines; Louis de Lorme Leder; Frederick Maurice Gingold, M.B.E.; Lionel John Marden; Oswald Kynaston Griffin.

Medical Branch

Air Commadore to be Air Vice-Marshal.—David Munro, C.B., C.I.E., M.B., M.A., F.R.C.S. (E).

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the Royal Air Force are notified:—

General Duties Branch

Squadron Leader G. H. Hall, A.F.C., to R.A.F. Depot, on transfer to Home Estabt.; 15.6.25.

Flying Officers: B. I. Carter, to R.A.F. Depot on transfer to Home Estabt.; 17.6.25. F. S. Henderson, to R.A.F. Depot on transfer to Home Estabt.; 12.6.25. H. J. White, to R.A.F. Depot on transfer to Home Estabt.; 16.7.25. R. L. Yates, to No. 20 Sqdn., India; 6.6.25. L. E. Cutforth, to No. 5 Sqdn., India; 1.6.25. (Hon. F/L) H. W. A. Fox, to No. 28 Sqdn., India; 6.6.25. N. H. F. Unwin, to R.A.F. Depot on transfer to Home Estabt.; 19.6.25. C. J. Watson, to R.A.F. Depot on transfer to Home Estabt.; 19.6.25. H. E. Falkner, to Aeroplane and Armament Experimental Estabt., Martlesham Heath; 24.7.25. E. J. Rossiter, to R.A.F. Base, Leuchars; 6.7.25. C. W. S. Chalmers, to No. 2 Sqdn., Manston; 9.7.25. C. Walker, to R.A.F. Depot on appointment to a Short Service Commn.; 1.7.25.

Pilot Officers.—A. H. Willetts, to R.A.F. Base, Calshot; 16.6.25. J. S. Branch and A. C. H. Sharp, to No. 4 Sqdn., S. Farnborough; 15.6.25. S. E. Bulloch, to No. 25 Sqdn., Hawkinge; 15.6.25. H. E. N. Burton and L. S. Birt, to No. 32 Sqdn., Kenley; 15.6.25. P. S. Blockey to No. 56 Sqdn., Biggin Hill; 15.6.25. C. G. Crowden and W. T. Holmes, to No. 19 Sqdn., Duxford; 15.6.25. F. H. Farrow, to No. 13 Sqdn., Andover; 15.6.25. R. F. Francis, A. E. Haes, G. D. Middleton, W. E. Nicholls and A. G. Pickering, to R.A.F. Base, Calshot; 16.6.25. C. A. E. S. Kregor and G. A. Younger, to No. 29 Sqdn., Duxford; 15.6.25. E. H. Newman and A. T. S. Studdert, to No. 3

Sqdn., Upavon; 15.6.25. P. H. Nicholls and C. E. Galpin, to No. 17, Sqdn., Hawkinge; 15.6.25. C. H. Noble, to No. 2 Sqdn., Manston; 15.6.25. J. A. Mollison, to No. 20 Sqdn., India; 20.2.25. S. H. V. Harris, to No. 24 Sqdn., Kenley; 6.7.25. H. R. F. Baxter, to R.A.F. Depot; 26.6.25.

Medical Branch

Wing Commander.—A. S. Glynn, M.B., to H.Q., Cranwell; 28.6.25.
Flight Lieutenants.—T. R. S. Thompson, M.B., to H.Q., Coastal Area; 10.7.25. R. S. Topham, M.B., D.P.H., D.M.R.E., to R.A.F. Depot; 13.7.25. P. C. Livingstone, D.P.H., D.O.M. and S.B.A., to H.Q., Inland Area; 26.6.25. J. A. Perdrau, M.D., to No. 39, Sqdn., Spittlegate; 16.6.25.
Flight Lieutenant.—J. S. Wilson, M.D., B.A., to R.A.F. Depot, on transfer to Home Estabt.; 9.6.25.
Flight Lieutenants: A. C. Ransford, to Electrical and Wireless Sch., Flowerdown; 2.7.25. M. Coghlan, M.B., to R.A.F. Depot; 5.7.25.
Flying Officer (Dental).—F. F. Anslow, to No. 10 Group H.Q., Lee-on-Solent; 24.6.25.
Flying Officers.—P. D. Barling, M.B., to R.A.F. Depot; 22.6.25. H. W. D. Mackenzie, M.B., to Central Flying Sch., Upavon; 22.6.24. B. Pollard, to No. 5 Flying Training Sch., Sealand; 26.6.25. R. F. G. Dickson, to No. 24 Sqdn., Kenley; 20.6.25.
Flying Officers: A. Harvey, M.B., to Engine Repair Depot, Egypt; 17.6.25. W. A. Beck, M.B., D.P.H., to Sch. of Army Co-operation, Old Sarum; 1.7.25. P. D. Barling, M.B., to Aeroplane and Armament Experimental Estabt., Martlesham Heath; 30.6.25.

The Investiture

At Buckingham Palace on July 4 His Majesty the King held an Investiture, at which the following were invested by the King with the insignia of the respective divisions of the Orders into which they have been admitted:—

O.B.E. (Military Division)

Squadron-Leader Norman Spratt, R.A.F.

M.B.E. (Military Division)

Flying-Officer Ernest Bullen, R.A.F.

Flying-Officer Edwin Newman, R.A.F.

Sergeant-Major Albert Harbot, R.A.F.

His Majesty then conferred decorations as follows:—

Distinguished Flying Cross

Squadron-Leader Richard Saul, R.A.F.

Flight-Lieut. Thomas Thompson, R.A.F.

Flying-Officer David Anderson, R.A.F.

Flying-Officer Alan Shipwright, R.A.F.

Bar to the Air Force Cross

Flight-Lieut. Ralph Booth, R.A.F.

Air Force Cross

Flight-Lieut. William Somervell, R.A.F.

Amongst those present were Air-Marshal Sir John Salmond (Principal Air Aide-de-Camp) and Group Capt. L. W. B. Rees, V.C., R.A.F.

THE ROYAL AIR FORCE MEMORIAL FUND

At a meeting of the Executive Committee held on July 1 the following members of the committee were present: Lord Hugh Cecil (chairman), Dame Helen Gwynne-Vaughan, Mrs. B. H. Barrington-Kennett, Mrs. L. M. K. Pratt-Barlow, Sir Charles McLeod, Air Vice-Marshal Sir John Salmond, Air Vice-Marshal F. R. Scarlett, Air Vice-Marshal H. R. M. Brooke-Popham, Air Commodore T. I. Webb-Bowen, Air Commodore E. R. Ludlow-Hewitt.

The committee approved of an issue of grants made by the Grants Sub-Committee and by the Secretary between April 22, the date of the last meeting and the current date, amounting to £1,403 6s. 11d.

With regard to Vanbrugh Castle School, a very long and exhaustive discussion took place as to the question of increasing the size and usefulness of the school, but it was decided by a majority that, at present, owing to the financial obligations involved, a scheme of extension should not be proceeded with.

A further application for benefit under the Salting Benefaction and regarding the education of the daughter of an ex-officer of the Royal Air Force, was considered and approved.

The Committee had before them a request from the Duke of Atholl, Chairman of the Scottish National War Memorial, for a contribution towards the erection of an R.A.F. bay in the war memorial, which is being erected on Edinburgh Castle rock, and which commemorates the services of the Royal Navy, the historic Scottish regiments and the R.A.F. Sir Robert Lorimer, A.R.A., Edinburgh, was in attendance and explained his drawings and gave details of the work. After making various suggestions, the Committee approved of a grant of money for the purpose named.

The Committee further approved of a small grant for the erection in the Royal Military College Chapel, Sandhurst, of a panel to the memory of ex-cadets of the college who were killed in the Great War, 1914-1919, whilst serving with the R.F.C. or R.A.F.

The Committee adjourned for the vacation until October 21.

Aeronautical Research Appointments

THE Air Ministry announces:—The Right Hon. Sir Samuel Hoare, Secretary of State for Air, has appointed Mr. H. E. Wimperis, M.A., F.R.Ae.S., M.I.E.E., to be Director of Scientific Research, and Mr. D. R. Pye, M.A., to be Deputy-Director of Scientific Research under the Air Ministry.

These appointments are made in pursuance of the policy already announced, by which the functions of Scientific Research and Technical Development, which were formerly combined in one directorate, have been divided between two directorates, both of which, however, come under the supervision of the Air Member for Supply and Research.

Formation of No. 502 (Bombing) Squadron

THE Air Ministry announces, via Intelligence No. 470:—It is notified for information that the first Special Reserve Squadron to be established under the Home Defence Expansion Scheme of the Royal Air Force is in course of formation at Aldergrove Aerodrome, near Belfast. This unit has been allotted the title of No. 502 (Bombing) Squadron. The Squadron, like all Special Reserve units of the Royal Air Force, will be composed of approximately one-third regular and two-thirds non-regular personnel, the majority of whom must be skilled tradesmen. The organisation of the squadron on its regular side is now complete, and as from Monday, July 6, the officer commanding the squadron is prepared to receive applications for engagement as officers and airmen from Belfast and surrounding district. In the first instance, the squadron will be equipped for training purposes with Avros and Vickers "Vimys," and at a later date it will be provided with aircraft similar to those of a regular twin-engined bombing squadron.

A Correction

THE N.V. Nederlandsche Vliegtuigenfabriek (Fokker) write us—under date July 7—from Amsterdam as follows:—

"Owing to a last-minute change of the photograph illustrating our advertisement in last week's special number of 'FLIGHT' an unfortunate error was made, the result of which was that the text of the advertisement gave the faulty impression, or at any rate might give that impression, that the height flight described in our advertisement was carried out on a Rolls-Royce engine machine.

"Such was, however, not the case, the machine used for Mr. Grase's height flight being fitted with a 450 h.p. Napier 'Lion' engine.

"We should, therefore, be very much obliged, if you would put a correction note in the editorial part of your esteemed journal in this week's issue."

SOCIETY OF MODEL AERONAUTICAL ENGINEERS (London Aero-Models Association)

THE two competitions for the Gamage and Sir John Shelley Cups were held at Wimbledon Common on July 4, in spite of a troublesome wind. Nine machines took part in the former competition and good flying was witnessed; the first three places are given.

Gamage Challenge Cup Competition

(Average duration of three flights, $\times \sqrt{\text{loading}}$)

Name.	Weight.	Loading.	Average duration of 3 flights.	Total number of points.
1 S. C. Hersom	6½ ozs.	3.3	1.83 78.5 secs.	144
2 B. K. Johnson	8 "	7.25	2.69 48.4 "	130
3 F. de P. Green	11 "	5.75	.4 29.5 "	71

N.B.—If any other competitor wishes to have a complete set of results of the nine machines, these will be sent on application to the Competition Secretary, Mr. B. K. Johnson, 46, Norton Road, Wembley.

The Sir John Shelley Cup (which is for models using any power other than rubber) was won by D. A. Pavely (using a compressed-air fuselage model), with a performance of 43 secs. duration.

On Saturday, July 18, the competition for the Lady Shelley Challenge Cup will be held at Sudbury, 3.30 p.m. For rules, see FLIGHT, April 9.

Attempts on general records will also be made.

Attempts on existing spar glider record of 52½ secs. will be made on Saturday, July 25, at Sudbury. (Mr. W. E. Evans has offered a special prize to any member beating this record.) Hon. Secretary, A. E. Jones, 48, Narcissus Road, Hampstead, N.W. 6.

NEW COMPANY REGISTERED

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